

VOLUME 21
NUMBER 9

AMAZING STORIES

SEPTEMBER
1947

AMAZING

SEPTEMBER 25¢

STORIES



THE STAR KINGS by EDMOND HAMILTON



ZIFF-DAVIS FINGERPRINT MYSTERY HEADLINERS

THE SENATOR'S NUDE by BILL GOODE

Hilarious Homicide: Headlines scream, "NUDE GIRL FOUND MURDERED IN SENATOR'S BED."—and all Washington is in an uproar, including Congress, the police and society. A new detective team solves the funniest murder in a decade. \$2.50.



A SHROUD FOR ROWENA by VIRGINIA RATH

A GHOST? Rowena walked out of the house one stormy night and never come back. But what shodawy creature is this that, seven years later, wanders mysteriously through the house, uses Rowena's jasmine scent and hums Rowena's old songs? And who kills private detective Henry Hunt? It's a Michael Dundos story, and a good one. \$2.50.



COUNTERFEIT WIFE by BRETT HALLIDAY

Michael Shayne in a humdinger. 'Nuff said.



\$2.50.

THE RESTLESS CORPSE by ALAN PRUITT

DO DEAD BODIES MOVE? Madcop April Holiday running away from her newspaper owning father is caught by star reporter Don Carson. They get mixed up with a dead body in her room and move the corpse out. It gets back again—mysteriously—and they have to turn up the murderer to clear themselves. Breezy, entertaining, fast moving reading. \$2.50.



ZIFF-DAVIS
185 N. WABASH AVE., CHICAGO 1, ILLINOIS

Available wherever books are sold



KNOWLEDGE
THAT HAS
ENDURED WITH THE
PYRAMIDS

A SECRET METHOD FOR THE MASTERY OF LIFE

WHENCE came the knowledge that built the Pyramids and the mighty Temples of the Pharaohs? Civilization began in the Nile Valley centuries ago. Where did its first builders acquire their astounding wisdom that started man on his upward climb? Beginning with naught they overcame nature's forces and gave the world its first sciences and arts. Did their knowledge come from a race now submerged beneath the sea, or were they touched with Infinite inspiration? From what concealed source came the wisdom that produced such characters as Amenhotep IV, Leonardo da Vinci, Isaac Newton, and a host of others?

Today it is known that they discovered and learned to interpret certain *Secret Methods* for the development of their inner power of mind. They learned to command the inner forces within their own beings, and to master life. This secret art of living has been preserved and handed down throughout the ages. Today it is extended to those who dare to use its profound principles to meet and solve the problems of life in these complex times.

This Sealed Book—FREE

Has life brought you that personal satisfaction, the sense of achievement and happiness that you desire? If not, it is your duty to yourself to learn about this rational method of applying natural laws for the mastery of life. To the thoughtful person it is obvious that everyone cannot be entrusted with an intimate knowledge of the mysteries of life, for everyone is not capable of properly using it. But if you are one of those possessed of a true desire to forge ahead and wish to make use of the subtle influences of life, the Rosicrucians (not a religious organization) will send you *A Sealed Book of explanation* without obligation. This Sealed Book tells how you, in the privacy of your own home, without interference with your personal affairs or manner of living, may receive these secret teachings. Not weird or strange practices, but a rational application of the basic laws of life. Use the coupon, and obtain your complimentary copy.



AMENHOTEP IV
Founder of Egypt's
Mystery Schools

Use this
coupon for
FREE
copy of book

SCRIBE Y. R. W.
The Rosicrucians (AMORC)
San Jose, California

Please send free copy of Sealed Book,
which I shall read as directed.

NAME _____

ADDRESS _____

CITY _____

The ROSICRUCIANS

SAN JOSE

(AMORC)

CALIFORNIA

AMAZING STORIES

Reg. U. S. Pat. Off.

SEPTEMBER 1947

All Features Complete

WILLIAM B. ZIFF
Chairman of the Board
and Publisher

B. G. DAVIS
President

Vice Presidents:
GEORGE BERNER
Sales and Advertising Director

MICHAEL H. FROELICH
Editorial Director

H. J. MORGANROTH
Production Director

H. G. STRONG
Circulation Director

Secretary-Treasurer
A. T. PULLEN

Art Director
HERMAN R. BOLLIN

Editor
RAYMOND A. PALMER

Managing Editor
HOWARD BROWNE

Associate Editors:
WILLIAM L. HAMLING
HENRY A. BOTT

Art Editor
MALCOLM SMITH

THE OBSERVATORY

By The Editor..... 6

THE INVENTOR OF THE CROOKES TUBE

By Carter T. Wainwright..... 57

THE PROBLEMS OF GEOLOGY No. 1

By L. Taylor Hansen..... 89

WAS THE SINKING OF ATLANTIS POSSIBLE?

By Lucas C. Wellington..... 91

INSIDE THE EARTH

By Mildred Murdoch..... 165

SCIENTIFIC MYSTERIES

By L. Taylor Hansen..... 166

VIGNETTES OF FAMOUS SCIENTISTS

By Alexander Blade..... 170

SPACE SHIPS LIMITED No. 4

By Jackson Ross..... 172

DISCUSSIONS

By The Readers..... 174

TO THE MOON—VIA ELECTRICITY

By Charles Recour..... 176

Published monthly by ZIFF-DAVIS PUBLISHING COMPANY at 185 North Wabash Ave., Chicago 1, Ill. New York Office, Empire State Building, New York 3, N. Y. Washington Office, International Building, 1319 F Street, N.W., Washington 4, D. C. Entered as second class matter April 11, 1946, at the Post Office, Chicago, Illinois, under the Act of March 3, 1879. Subscription: 12 U. S., Canada, Mexico, South and Central America and U. S. Possessions, \$2.50 for 12 issues; all other foreign countries, \$4.50 for 12 issues. Subscribers should allow at least two weeks for change of address. All communications about subscriptions should be addressed to the Director of Circulation, Ziff-Davis Publishing Company, 185 North Wabash Ave., Chicago 1, Ill.



All Stories Complete

.....

- THE STAR KINGS** (Novel—75,000)..... by Edmond Hamilton..... 8
Illustrated by Malcolm Smith

It's certainly glamorous to be called a "king of the stars," but when you get right down to it, it's the hardest title to maintain in the universe!

- THE UNINVITED JEST** (Short—7,300)..... by Rog Phillips..... 44
Illustrated by Joe Wirt Tillotson

The rocket came in, spewing strange objects about—and then began a jest of Fate that was far from welcome, nor was it the least bit humorous . . .

- TERROR ON THE TELEPHONE** (Short—9,000)..... by Lee Francis..... 58
Illustrated by Enoch Sharp

Strange things began to happen in the telephone exchange, and its brick walls sealed in the most terrifying menace that ever threatened a city!

- ONE MORE SPRING** (Short—7,500)..... by Frances Yerxa..... 74
Illustrated by Rod Ruth

Would there be another Spring? The world was dying, and it was because of the failure of chlorophyll. Without it there would be no vegetation!

Front cover painting by Malcolm Smith illustrating "The Star Kings"

.....

Copyright 1947, ZIFF-DAVIS PUBLISHING COMPANY
Member of the Audit Bureau of Circulations

We do not accept responsibility for the return of unsolicited manuscripts or artwork. To facilitate handling, the author should enclose a self-addressed envelope with the requisite postage attached, and artists should enclose or forward return postage. Accepted material is subject to whatever revision is necessary to meet requirements. Payment covers all authors', contributors' and contestants' magazine rights in the U.S.A. and all other countries in the article and/or illustrations and for publicity and promotion in connection therewith and will be made at our current rates upon acceptance. All photos and drawings will be considered as part of material purchased. The names of all characters that are used in short stories, serials and semi-fiction articles that deal with types are fictitious. Use of a name that is the same as that of any living person is coincidental.

The

OBSERVATORY

..... by the Editor

MALCOLM SMITH, who holds the distinction of having painted one of the best covers ever painted for *Amazing Stories*, that for "Murder In Space" some years ago, has done it again. The "Murder In Space" cover hangs on our office wall, and if we had another frame we'd hang this month's cover there too! Yes, the lad did something there, and we think you'll agree with us. It's the old "war in space" theme, done as it's never been done before!

AND who do you think did the novel this cover illustrates? Well, old "universe wrecker" Edmond Hamilton, of course! Blow me down, if this isn't like old times. And if you think Hamilton has lost his touch through the years, you've got another think coming. "The Star Kings" is a "king" sized story and takes all the "stars" you can give it. You'll find yourself paralyzed with the magazine in your hands until you read every last word of "The Star Kings" and only then will you be able to lay it down! Yessir, orchids to Hamilton, because he's due for a bale of 'em this time!

LEE FRANCIS has a unique yarn in this issue. It's called "Terror On The Telephone," and when you finish it, you'll know that the title means—just what it says! Terror. It'll make your hair stand on end. And you'll murmur, "boy can that baby write!" just as we did when we read the story. Lee, you did a grand job on this one, and we'd sure admire to see more!

"THE UNINVITED JEST" sounds like a pun on another story, to us, but maybe Rog Phillips meant it two ways? We think you'll sorta agree with us when you read his story in this issue. It's a queer one, and something to think about. We like Rog for his original ideas, and his fresh treatment. He always says it's because he knows nothing about this type of fiction, being a calm, cold, mathematical scientist. Well, you may be able to remain calm and cold and mathematical about this story, but your editor didn't. He still feels a bit queasy.

JUST for fun, we're not going to mention the fourth story in this issue. We won't mention a word about it. Not even its title. You look it

up and find out for yourself what it's about. Then you write in and tell us! We think you'll have a lot to say.

WE want to thank the readers of *Amazing Stories* for the flood of mail on the big June issue with all the Shaver stuff in it. You won't believe this, but we haven't even opened all of the letters yet, much less read them all! We never saw anything like it! Well, anyway, when the publishers found out they decided to suspend publication of two of our detective-mystery magazines, and our adventure magazine, so that, during this acute paper shortage, more copies of *Amazing Stories* and its sister magazine, *Fantastic Adventures*, could be published. In fact, *Fantastic Adventures* was immediately placed on a monthly basis, as *Amazing Stories* has been. So you lovers of science fiction, fantasy, the unusual, from caves to ghosts, from rockets to poltergeists, from Mars to Hades can now count on an additional treat every other month.

YOUR editor, continuing his griping about engineers, recently made a test on some drinking glasses. Remember how, when they brought out those glasses with the "ring" edges, they said something about not dripping, easier to drink, etc., etc.? Well, here's the scientific mumbo-jumbo behind it. If you strike two objects together, the force of the impact is distributed over the area of contact. So, to increase the force of impact, you reduce the area of contact. Those ring-edged glasses do exactly that. They reduce the point of impact to a point, instead of an area and the result is the glasses chip eight times faster than without the ring edges. Moral, don't buy the darn things! You are being scientifically robbed! The whole thing is a clever bit of engineering designed to sell more glasses by reducing their life. The least bit of contact, and you have a chipped glass, and who wants to drink out of a chipped glass? Also, the ring adds strength so that thinner glass can be used, which breaks easier! We're going to keep our eye open for more of this kind of science and expose it in *Amazing Stories* from time to time. Let's show these boys we're not so dumb!

"THE STAR KINGS" ran so long (75,000 words) that we were hard pressed to balance

this issue, consequently there are fewer articles and features, and a shorter Discussions column. We think the excellence of the novel will counter-balance the lack of features, and we'll promise to make up for it with an extra number next month.

AMONG the articles in this issue is the fourth in Jackson Ross' series on "Space Ships Limited" in which he debunks this "rocket to space" business as it's being bandied about by the newspapers. Space travel isn't going to be the lead-pipe cinch everybody seems to think it is. That is, everybody except readers of *Amazing Stories*, who know you can't just "fly away to the stars" with the greatest of ease.

CHARLES RECOUR, however, tells us, in "To The Moon—Via Electricity," just how we can contact the Moon today, in calm, cold, irrefutable terms. No fiction there. It's calm, cold . . . okay, Charlie, we'll let it go at that! It's *truth*.

NOTICE the cartoon on this page! One of our cartoon-minded readers read our article on the so-called "Devil's Tower" which is really "Bear Lodge" on how it might be a petrified tree stump. Well, we guess that just about settles the argument! Who could deny evidence like that! And we wish it were true!

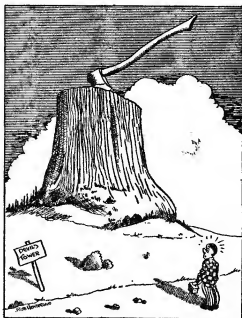
WANTA know what's coming to you in the future? Well, here's a slant or two. Next month's cover story is by Henry Hasse, and it's called "Trail Of The Astrogar." It has a cover by Robert Gibson Jones, so you know it's going to be a humdinger of a cover. The story, needless to say, is also a humdinger—it's by Hasse! Robert Moore Williams presents "Secret Of The Swamp" which is one of those stories for which he is famous. Never let it be said that Bob doesn't come up with one of his unusual "classics" at least once a year. Robert St. John is the illustrator, and that'll bring nostalgic memories of past glories to your mind!

WE have some tremendous novels coming up for the future too. We'll mention a few: "The Giants Of Mogo" by Don Wilcox . . . now here's a story. Remember "The Earth Stealers"? Well, here's a yarn to end all Wilcox yarns! Good? It's so good we're going to be bragging about it for ten years to come! Don't miss it. Then comes "Zero, A.D." by Robert Wade, which has one of the most sensational time-travel angles we've ever seen. It's been ten years since a really good time travel yarn has been written, and this is it. "Gods Of Venus" by Richard S. Shaver is 87,000 words of terrific adventure. Not much of it true, we'll admit, but all of it is terrific. And it does contain enough Shaver *truth* to satisfy any fan of the Shaver Mystery. It is the first of two novels by Shaver, both about the same characters. The second is called "Daughter Of The Titan." Which will reassure you fans who were afraid Shaver had been

letting down. Lastly, David V. Reed, who has been writing a science fiction novel for us for five years, still hasn't finished it, although we've been paying him on the installment plan until we're dizzy. We predict that he will either shoot himself or go crazy before he finishes it. Or we will. Dammit, Dave, finish that novel or we'll wash you out of the fiction game! Our readers can't be made to wait like that! You think we're kidding?

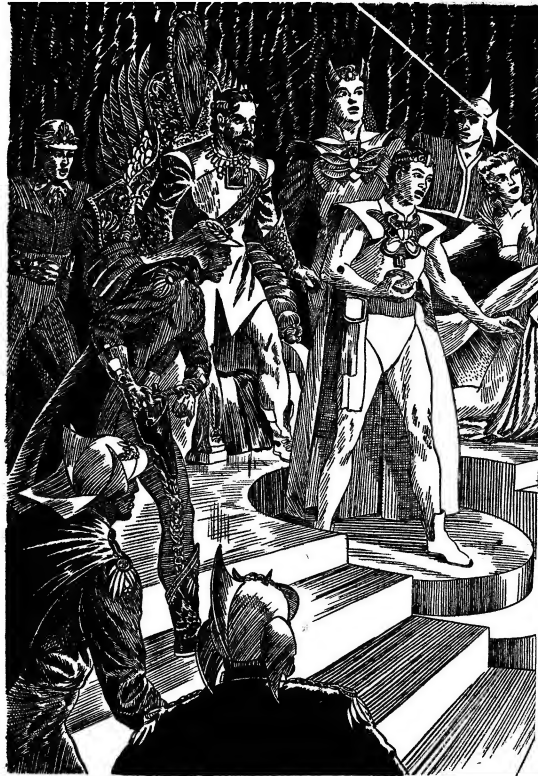
DISCUSSIONS this month contains a letter from Chester S. Geier about the Shaver Mystery Club. We're glad to know his first fan magazine is printed and distributed; and that first installment of Shaver's "Mandark" is tremendous in print. We hope all the Shaver fans contact him for a copy. *Amazing Stories* would have loved to present "Mandark" if it hadn't been such a colossal work, and on such a taboo subject. Anyway, we give Chet credit for the best printed fanmag we've ever seen. The new crop of fans certainly are on the ball! More power to 'em. It's time the fan world showed some real life.

WE have some sensational letters to print in the Discussions column next month, and we're going to enlarge it considerably for that issue. We want to prove that Shaver's voices are something to be reckoned with, and that there seems to be a definite pattern to things which is beginning to clear up. Yes, there are some things we know for sure, and we wonder what will happen when we demonstrate the truth about them—such as welding machines! Here's something for the psychiatrists to study! Read it next month!—*Rap*.



"If that doesn't prove it's a tree, nothing will!"





THE STAR KINGS

by EDMOND HAMILTON



With a sharp hiss, a ray came
lancing down . . . and the smell
of burnt flesh rose on the air.

THE STAR KINGS

by EDMOND HAMILTON



With a sharp hiss, a ray came lancing down . . . and the smell of burnt flesh rose on the air.

WHEN John Gordon first heard the voice inside his mind, he thought that he was going crazy.

It came first at night when he was just falling asleep. Through his drowsing thoughts, it spoke sharp and clear.

"Can you hear me, John Gordon? Can you hear me call?"

Gordon sat up, suddenly wide awake and a little startled. There had been something strange and upsetting about it.

Then he shrugged. The brain played strange tricks when a man was half-asleep and the will relaxed. It couldn't mean anything.

He forgot it until the next night. Then, just as he began to slip into the realm of sleep, that clear mental voice came again.

"Can you hear me? If you can hear me, try to answer my call!"

Again Gordon woke up with a start. And this time he was a little worried. Was there something the matter with his mind? He had always heard it was bad if you started to hear voices.

He had come through the war without a scratch. But maybe those years of flying out in the Pacific had done something to his mind. Maybe he was going to be a delayed psychoneurotic casualty.

"What the devil, I'm getting excited about nothing," Gordon told himself roughly. "It's just because I'm nervous and restless."

Restless? Yes, he was that. He had been, ever since the war ended and he returned to New York.

You could take a young accountant clerk out of a New York insurance office and make him into a war pilot who could handle thirty tons of bomber as easily as he handled his fingers. You could do that, for they had done it to Gordon.

But after three years of that, it wasn't so easy to give that pilot a discharge button and a "thank you" and send him back to his office desk. Gordon knew that, too, by bitter experience.

It was queer. All the time he had sweated and risked his neck out there over the Pacific, he had been thinking how wonderful it would be to get back to his old job and his comfortable little apartment.

He had got back, and they were just the same as before. But he wasn't. The John Gordon who had come back was used to battle, danger and sudden death, but not used to sitting at a desk and adding up figures.

Gordon didn't know what he wanted, but it wasn't an office job in New York. Yet he'd tried to get these ideas out of his mind. He'd fought to get back into the old routine, and the fight had made him more and more restless.

And now this queer calling voice inside his brain! Did that mean that his nervousness was getting the best of him, that he was cracking up?

He thought of going to a psychiatrist, but shied at the idea. It seemed better to fight down this thing himself.

So the next night, Gordon grimly waited for the voice to call and prepared to prove to himself that it was all delusion.

IT DID not come that night, nor the next. He supposed it was over. Then the third night, it came more strongly than ever.

"John Gordon, listen to me! You are not having delusions! I am another man, speaking to your mind by means of a science I possess."

Gordon lay there in semi-sleep, and that voice seemed wonderfully real to him.

"Please try to answer me, John Gor-

don! Not with speech, but with thought. The channel is open—you can answer if you try.”

Dazedly, Gordon sent an answering thought out into the darkness.

“Who are you?”

The reply came quickly and clearly, with a pulse of eagerness and triumph in it.

“I am Zarth Arn, prince of the Mid-Galactic Empire. I speak to you from two hundred thousand years in your future.”

Gordon felt vaguely aghast. That couldn’t be true! Yet that voice was so real and distinct in his mind.

“Two hundred thousand years? That’s insane, impossible, to speak across a time like that. I’m dreaming.”

Zarth Arn’s reply came quickly. “I assure you that it is no dream and that I am as real as you are, even though two thousand centuries separate us.”

He went on. “Time cannot be crossed by any material thing. But thought is not material. Thought can cross time. Your own mind travels a little into the past every time that you remember something.”

“Even if it’s true, why should you call me?” Gordon asked numbly.

“Much has changed in two hundred thousand years,” Zarth Arn told him. “Long ago, the human race to whose first era you belong spread out to the other stars of the galaxy. There are great star-kingdoms now, of which the greatest one is the Mid-Galactic Empire.

“I am high in that Empire, and am a scientist and seeker of truth above all else. For years, I and a colleague have been delving into the past by throwing my mind back across the ages, groping and making contact with minds of men whose spirits are attuned to my own.

“With many of those men of the past, I have temporarily exchanged bodies!

The mind is a webwork of electrical energy which inhabits the brain. It can be drawn by suitable forces from the brain, and another electric webwork, another mind, installed in its place. My apparatus can accomplish that by sending my whole mind instead of just a thought-message into the past.

“Thus my mind has occupied the body of a man of past ages, while his mind was simultaneously drawn across time to inhabit *my* body. In that way, I have lived in and explored the history of many different eras of past human history.

“But I have never gone so far back in time as your own remote era. I want to explore *your* age, John Gordon. Will you help me? Will you consent to a temporary exchange of bodies with me?”

Gordon’s first reaction was a panicky refusal. “No! It would be ghastly, insane!”

“There would be no danger,” Zarth Arn insisted. “You would merely spend some weeks in my body in this age, and I in yours. And then Vel Quen, my colleague here, would effect a re-exchange.

“Think, John Gordon! Even as it would give me a chance to explore your long-dead age, so would it give you a chance to see the wonders of my time!

“I know your spirit, restless, eager for the new and unknown. No man of your age has ever been given such a chance to plunge across the great gulf of time into the future. Will you reject it?”

Suddenly Gordon felt caught by the glamor of the idea. It was like a wild bugle-call summoning to adventure hitherto undreamed.

A world and universe two thousand centuries in the future, the glories of a star-conquering civilization—to behold all that with his own eyes?

WAS it worth risking life and sanity for? If all this was true, was he not being offered a supreme chance at the adventure for which he had been so restlessly longing?

Yet still he hesitated. "I wouldn't know anything about your world when I awoke in it!" he told Zarth Arn. "Not even the language."

"Vel Quen would be here to teach you everything," the other answered quickly. "Of course, your age would be equally strange to me. For that reason, if you agree, I should want you to prepare thought-spools from which I could learn *your* language and ways."

"Thought-spools? What are they?" Gordon asked, puzzled.

"They are not yet invented in your age?" said Zarth Arn. "In that case, leave me some childrens' picture-books and dictionaries for learning your language and some sound-records of how it is spoken."

He continued. "You don't need to decide at once, John Gordon. Tomorrow I'll call you again and you can give me your decision then."

"Tomorrow I'll think that all this has just been a crazy dream!" Gordon exclaimed.

"You must assure yourself that it is no dream," Zarth Arn said earnestly. "I contact your mind when you are partly asleep because then your will is relaxed and the mind is receptive. But it is no dream."

When Gordon awoke in the morning, the whole incredible thing came back to him with a rush.

"Was it a dream?" he asked himself wonderingly. "Zarth Arn said it would seem like one. Of course, a dreamy-person would say that."

Gordon still could not make up his mind whether or not it had been real, by the time he went to work.

Never had the insurance office looked

so utterly drab and stifling as on that long day. Never had the petty routine of his duties seemed so barren and monotonous.

And all through the day, Gordon found himself dreaming wild visions of the splendor and magic wonder of great star-kingdoms two hundred thousand years in the future, of worlds new, strange, luring.

By the end of the day, his decision was reached. If this incredible thing was really true, he was going to do what Zarth Arn asked.

He felt a little foolish as he stopped on his way home and bought childrens' picture-books, language texts, and phonograph records intended for the teaching of English.

But that night, Gordon went early to bed. Strung to the highest pitch of feverish excitement, he awaited for Zarth Arn's call.

It did not come. For Gordon could not even begin to fall asleep. He was too tautly excited even to doze.

For hours, he tossed and turned. It was nearly dawn by the time he fell into a troubled doze.

Then, at once, the clear mental voice of Zarth Arn came into his mind.

"At last I can contact you! Now tell me, John Gordon, what is your decision?"

"I'll do it, Zarth Arn," answered Gordon. "But I must do it at once! For if I spend many more days thinking about the thing, I'll believe myself going crazy over a dream."

"It can be done at once!" was the eager reply. "Vel Quen and I have our apparatus ready. You will inhabit my body for six weeks. At the end of that time, I will be ready for the re-exchange."

Zarth Arn continued rapidly. "You must first make me one promise. Nobody in this age but Vel Quen will

know of this mind-exchange. You must tell *no one* here in my time that you are a stranger in my body. To do so might bring disaster on us both."

"I promise," Gordon replied quickly. He added troubledly, "You'll be careful with *my* body, won't you?"

"You have my word," was the answer of Zarth Arn. "Now relax yourself, so that your mind will offer no resistance to the force that draws it across the time-dimension."

That was easier to say than to do. Relaxing was not what a man felt like doing when his mind was about to be drawn from his body.

But Gordon tried to obey, to sink deeper into the dozing state.

Suddenly he felt a strange, uncanny tugging inside his brain. It was not a physical sensation, but it gave a feeling of magnetic power.

Fear such as John Gordon had never before experienced shrieked in his mind as he felt himself rushing into unplumbed darkness.

CHAPTER II

Future Universe

CONSCIOUSNESS came back slowly to Gordon. He found himself lying on a high table in a room of brilliant sunlight.

For some moments he lay looking up dazedly, feeling a terrible weakness and shakiness. Right over his head, as though just swung back, was a curious apparatus like a silver cap with many wires.

Then a face bent down into his view. It was the wrinkled face of an old, white-haired man. But the excitement he evidently felt made his blue eyes youthfully eager.

He spoke to Gordon in a voice shrill with excitement. But he spoke in a

language that was almost entirely unfamiliar.

"I can't understand you," Gordon said helplessly.

The other pointed to himself and spoke again. "Vel Quen," he said.

Vel Quen? Gordon remembered now. Zarth Arn had said that was the name of his scientific colleague in the future.

The future? Then the two scientists *had* effected that incredible exchange of minds and bodies across the abyss of time?

With sudden wild excitement, Gordon tried to sit up. He couldn't do it. He was still too weak, and slipped back.

But he had got a glimpse of his own body as he sat up, and the sight had stunned him.

It wasn't his body. It was not John Gordon's stocky, muscular figure. This was a taller, slimmer body he now inhabited, one dressed in silky white sleeveless shirt and trousers, and sandals.

"Zarth Arn's body!" husked Gordon. "And back in my own time, Zarth Arn is awaking in *mine*!"

Old Vel Quen apparently recognized the name he spoke. The old scientist nodded quickly.

"Zarth Arn—John Gordon," he said, pointing at him.

The exchange had worked! He had crossed two thousand centuries and was now in another man's body!

It didn't feel any different. Gordon tried moving his hands and feet. Every muscle responded perfectly. Yet his hair still bristled from the ghastly strangeness of it. He had an hysterical nostalgia for his own body.

Vel Quen seemed to understand his feelings. The old man patted his shoulder reassuringly, then offered him a crystal beaker filled with foaming red liquid. Gordon drank it, and began to feel stronger.

The old scientist helped him get up from the table, and steadied him as he stood looking wonderingly around the room.

Brilliant sunlight poured through tall windows that filled all eight sides of the octagonal chamber. The light flashed and glittered off machines and instruments and racks of queer metal spools. Gordon was no scientist, and all this science of the future baffled him.

Vel Quen led him toward a corner in which there was a tall mirror. He stood transfixed the moment he caught a glimpse of himself in the glass.

"So this is what I look like *now!*" Gordon whispered, staring wildly at his own image.

His figure was now that of a tall, black-haired young man of well over six feet. The face was dark, aquiline and rather handsome, with serious dark eyes. It was altogether different from John Gordon's own square, tanned face.

He saw that he was wearing snug-fitting shirt and trousers. Vel Quen threw a long, silky white cloak around his shoulders. The old scientist himself was similarly attired.

HE GESTURED to Gordon that he must rest. But weak as Gordon felt, he couldn't without first looking out at this unknown world of the far future.

He stumbled to one of the windows. He expected to look forth on wondrous vistas of super-modern cities, marvelous metropoli of the star-conquering civilization. But Gordon was disappointed.

Before him lay a scene of wild, forbidding natural grandeur. This octagonal chamber was the upper floor of a massive little cement tower which was perched on a small plateau at the edge of a sheer precipice.

Stupendous mountain peaks crowned

with glittering white snow rose in the bright sunlight. From them and from the tower, dark and awesome defiles dropped for thousands of feet. There was not another building in sight. It looked much like the Himalayas of his own time.

Weakness made John Gordon sway dizzily. Vel Quen hastily led him out of the tower-room and down to a small bedroom on the floor below. He stretched on a soft couch and was almost instantly asleep.

When Gordon awoke, it was another day. Vel Quen came in and greeted him, then checked his pulse and respiration. The old scientist smiled reassuringly, and brought him some food.

There was a thick, sweet, chocolate-colored drink, some fruit, some wafers like dry biscuits. It was all evidently charged with nutritional elements, for Gordon's hunger vanished after the slight meal.

Then Vel Quen began to teach him his language. The old man used a box-like little apparatus which produced realistic stereoscopic images, carefully naming each object or scene he exhibited.

Gordon spent a week in this task, not going outside the tower. He picked up the language with astonishing quickness, partly because of Vel Quen's scientific teaching and partly because it was based on his own English. Two thousand centuries had greatly enlarged and changed its vocabulary, but it was not like a completely alien tongue.

At the end of that week Gordon's strength had fully returned, and by that time he was able to speak the language fluently.

"We are on the planet Earth?" was the first eager question he had put to Vel Quen.

The old scientist nodded. "Yes, this tower is located amid the highest

mountains of Earth."

So it was the Himalayas whose snowy peaks rose around the tower, as Gordon had guessed. They looked as wild and lonely and grand as when he had flown over them in war days long ago.

"But aren't there any cities or people left on Earth?" he cried.

"Certainly there are. Zarth Arn chose this lonely spot on the planet, simply so that his secret experiments would not be disturbed.

"From this tower, he has been exploring the past by going back into the bodies of many men in various epochs of human history. Yours is the remotest period of the past that Zarth Arn has yet tried to explore."

It was a little overwhelming to John Gordon to realize that other men had found themselves in his own uncanny present position.

"Those others—they were able to return without trouble to their own bodies and times?"

"Of course—I was here to operate the mind-transmitter, and when the time came I effected the re-exchange just as I will do with you later."

THAT was reassuring. Gordon was still wildly excited by this unprecedented adventure into a future age, but he hated to think that he might be marooned indefinitely in a stranger's body.

Vel Quen explained to Gordon in detail the amazing scientific method of contacting and exchanging minds across time.

He showed him the operation of the telepathic amplifier that could beam its thought-message back to any selected mind in the past. And then he outlined the operation of the mind-exchange apparatus itself.

"The mind is an electric pattern in the neurones of the brain. The forces

of this apparatus detach that pattern and embody it in a network of non-material photons.

"That photon-mind can then be projected along any dimension. And since time is the fourth dimension of matter, the photon-mind can be hurled into past time. The forces operate in a two-way channel, simultaneously detaching and projecting both minds so as to exchange them."

"Did Zarth Arn himself invent this method of exchanging minds?" Gordon asked wonderingly.

"We invented it together," Vel Quen said. "I had already perfected the principle. Zarth Arn, my most devoted scientific pupil, wanted to try it out and he helped me build and test the apparatus.

"It has succeeded beyond our wildest dreams. You see those racks of thought-spools?* In them is the vast mass of information brought back by Zarth Arn from past ages he has explored thus. We've worked secretly because Arn Abbas would forbid his son to take the risk if he knew."

"Arn Abbas?" repeated Gordon questioningly. "Who is he, Vel Quen?"

"Arn Abbas is sovereign of the Mid-Galactic Empire, ruling from its capital world at the sun Canopus. He has two sons. The oldest is his heir, Jhal Arn. The second son is Zarth Arn."

Gordon was astounded. "You mean that Zarth Arn, the man whose body I now inhabit, is son of the greatest ruler in the galaxy?"

The old scientist nodded. "Yes, but

*Note: Thought-spools were a development of the encephalographic records made as early as 1933 by American psychologists, in which the electric thought-fluctuations of the brain were recorded on moving tape. In this improved model, the encephalographic recording was played back through an electric apparatus and produced pulsations which re-created the recorded thoughts in the listener's brain. . . . Ed.

Zarth is not interested in power or rule. He is a scientist and scholar, and that is why he leaves the court at Throon to carry on his exploration of the past from this lonely tower on Earth."

Gordon remembered now that Zarth Arn had said he was high in the Empire. But he had had no suspicion of his true exalted position.

"Vel Quen, what exactly is the Mid-Galactic Empire? Does it take in all the galaxy?"

"No, John Gordon. There are many star-kingdoms in the galaxy, warlike rivals at times. But the Mid-Galactic Empire is the largest of them."

Gordon felt a certain disappointment. "I had thought the future would be one of democracy, and that war would be banished."

"The star-kingdoms are really democracies, for the people rule," Vel Quen explained. "We simply give titles and royal rank to our leaders, the better to hold together the widely separated star-systems and their human and aboriginal races."

Gordon could understand that. "I get it. Like the British democracy in my own day, that kept up the forms of royalty and rank to hold together their realm."

"And war *was* banished on Earth, long ago," Vel Quen went on. "We know that from traditional history. The peace and prosperity that followed were what gave the first great impetus to space-travel."

"But there have been wars between the star-kingdoms because they are so widely separated. We are now trying to bring them together in union and peace, as you unified Earth's nations long ago."

VEL QUEN went to the wall and touched a switch beside a bank of lenses. From the lenses was projected

a realistic little image of the galaxy, a flat, disk-shaped swarm of shining sparks.

Each of those little sparks represented a star, and their number was dizzying to John Gordon. Nebulae, comets, dark clouds—all were faithfully represented in this galactic map. And the map was divided by zones of colored light into a number of large and small sections.

"Those colored zones represent the boundaries of the great star-kingdoms," Vel Quen explained. "As you see, the green zone of the Mid-Galactic Empire is much the largest and includes the whole north* and middle of the galaxy. Here near its northern border is Sol, the sun of Earth, not far from the wild frontier star-systems of the Marches of Outer Space."

"The little purple zone south of the Empire comprises the Baronies of Hercules, whose great Barons rule the independent star-worlds of Hercules Cluster. Northwest lies Fomalhaut Kingdom, and south of it stretch the kingdoms of Lyra, Cygnus, Polaris and others, most of these being allied to the Empire."

"This big black blot southeast of the Empire is the largest dark cloud in the galaxy, and within it lies the League of Dark Worlds, composed of suns and worlds engulfed in the perpetual dimness of that cloud. The League is the most powerful and jealous rival of the Empire."

"The Empire is dominant and has long sought to induce the star-kingdoms to unite and banish all war in the galaxy. But Shorr Kan and his League have intrigued against Arn Abbas' policy of

*Note: Six arbitrarily assigned directions were used as axes of reference in galactic travel—north, east, south, west, zenith and nadir . . . Ed.

unification, by fomenting the jealousies of the smaller star-kingdoms."

It was all a little overwhelming for John Gordon, man of the 20th Century. He looked in wonder at that strange map.

Vel Quen added, "I shall teach you how to use the thought-spools and then you can learn that great story."

In the following days while he learned the language, Gordon had thus learned also the history of two thousand centuries.

It was an epic tale that the thought-spools unfolded of man's conquest of the stars. There had been great feats of heroism in exploration, disastrous wrecks in cosmic clouds and nebulae, bitter struggles against stellar aborigines too alien for peaceful contact.

Earth had been too small and remote to govern all the vast ever-growing realm of man. Star-systems established their own governments, and then banded into kingdoms of many stars. From such a beginning had grown the great Mid-Galactic Empire which Arn Abbas now governed.

Vel Quen finally told Gordon, "I know you want to see much of our civilization before you return to your own body and time. First let me show you what Earth looks like now. Stand upon this plate."

He referred to one of two round quartz plates set in the floor, which were part of a curious, complex apparatus.

"This is a telestereo, which projects and receives stereoscopic images that can see and hear," Vel Quen explained. "It operates almost instantaneously over any distance."*

*Note: The telestereo operated by sub-spectrum rays many times faster than light, the rays that were the foundation of interstellar travel and civilization. Using the fastest of this famous group of rays, it could communicate almost instantly across the galaxy. . . . Ed.

Gordon stood gingerly with him on the quartz plate. The old scientist touched a switch.

Abruptly, Gordon seemed to be in another place. He knew he was still in the tower laboratory, but a seeing, hearing image of himself now stood on a stereo-receiver on a terrace high in a great city.

"This is Nyar, largest city of Earth," said Vel Quen. "Of course, it cannot compare with the metropoli of the great star-worlds."

Gordon gasped. He was looking out over a mammoth city of terraced white pyramids.

Far out beyond it he could glimpse a spaceport, with rows of sunken docks and long, fishlike stair-ships in them. There were also a few massive, grim-looking warships with the Empire's comet emblem on them.

But it was the great city itself that held his stunned gaze. Its terraces were flowering green gardens with gay awnings and crowds of pleasure-seeking people.

Vel Quen switched them to other stereo-receivers in Nyar. He had glimpses of the interior of the city, of halls and corridors, of apartments and workshops, of giant underground atomic power plants.

The scene suddenly vanished from John Gordon's fascinated eyes as Vel Quen snapped off the telestereo and darted toward a window.

"There is a ship coming!" he exclaimed. "I can't understand it. No ship ever lands here!"

Gordon heard a droning in the air and glimpsed a long, slim, shining craft dropping out of the sky toward the lonely tower.

Vel Quen looked alarmed. "It's a warship, a phantom-cruiser, but has no emblem on it. There's something wrong about this!"

THE shining ship landed with a rush on the plateau a quarter-mile from the tower. A door in its side instantly slid open.

From it poured a score of gray-uniformed, helmeted men who carried weapons like long, slim-barrelled pistols, and who advanced in a run toward the tower.

"They wear the uniform of Empire soldiers but they should not have come here," Vel Quen said. His wrinkled face was puzzled and worried. "Could it be—"

He broke off, seeming to reach a sudden decision. "I am going to notify the Nyar naval base at once!"

As the old scientist turned from John Gordon toward the telestereo, there came a sudden loud crash below.

"They have blasted in the door!" cried Vel Quen. "Quick, John Gordon, take the—"

Gordon never learned what he meant to tell him. For at that moment, the uniformed men came rushing up the stair into the room.

They were strange-looking men. Their faces were white, a pallid, colorless and unnatural white.

"League soldiers!" cried Vel Quen, the instant he saw them thus close. He whirled to turn on the telestereo.

The leader of the invaders raised his long, slim pistol. A tiny pellet flicked from it and buried itself in Vel Quen's back. It instantly exploded in his body. The old scientist dropped in his tracks.

Until that moment, ignorance and bewilderment had held Gordon motionless. But he felt a hot rage burst along his nerves as he saw Vel Quen fall. He had come to like the old scientist, in these days.

With a fierce exclamation, Gordon plunged forward. One of the uniformed men instantly raised his pistol.

"Don't blast him—it's Zarth Arn

himself!" yelled the officer who had shot down Vel Quen. "Grab him!"

Gordon got his fists home on the face of one of them, but that was all. A dozen hands grasped him, his arms were twisted behind his back, and he was held as helpless as a raging child.

The pallid officers spoke swiftly to Gordon. "Prince Zarth, I regret we had to blast your colleague but he was about to call for help and our presence here must not be detected."

The officer continued rapidly. "You yourself will not be harmed in the slightest. We have been sent to bring you to our leader."

Gordon stared at the man. He felt as though all this was a crazy dream.

But one thing was clear. They didn't doubt he was Zarth Arn. And that was natural, seeing that he *was* Zarth Arn, in body.

"What do you mean?" he demanded furiously of the other. "Who are you?"

"We came from the Cloud!" answered the pallid officer instantly. "Yes, we are from the League and have come to take you to Shorr Kan."

It was still all baffling to John Gordon. Then he remembered some of the things that old Vel Quen had told him.

SSHORR KAN was leader of the League of the Dark Worlds which was the greatest foe of the Empire. That meant that these men were enemies of the great star-kingdom to whose ruling house Zarth Arn belonged.

They thought that *he* was Zarth Arn and were kidnapping him! Zarth Arn had never foreseen anything like this happening when he had planned the exchange of bodies!

"I'm not going with you!" Gordon cried. "I'm not leaving Earth!"

"We'll have to take him by force," rasped the officer to his men. "Bring him along."

CHAPTER III

Mystery Raiders

There was a sudden interruption. Into the tower came running a uniformed soldier, his face livid with excitement.

"The radar officer reports three craft of cruiser size heading in from space toward this quarter of Earth!"

"Empire patrol-cruisers!" yelled the League officer. "Quick, out of here with him!"

But Gordon had seized the moment of their alarm to bunch himself. Now with a violent effort he broke free of their grasp.

He grabbed up a heavy metal tool as the pallid men rushed him, and struck savagely with it at their faces.

They were at a disadvantage for they did not want to kill or injure him, while he had no such reluctance. His savage blows dropped two of the soldiers. Then the others seized him again and wrested his makeshift weapon away from him.

"Now to the ship with him!" panted the pallid League officer. "And hurry!"

Held by four big League soldiers, Gordon was dragged down the stairs and out of the tower into the biting, frosty air.

They were halfway to the shining ship when he saw the grim black gun-muzzles that projected from its side swinging suddenly to point skyward. Volleys of small shells burst upward from them.

The pallid officer yelled as he looked upward. John Gordon glimpsed three massive, fish-shaped warships diving straight down toward them.

There was an immense explosion. It hit Gordon and his captors like a giant hand and hurled them from their feet.

Half stunned, Gordon heard the deafening drone of great ships swooping toward the ground. By the time

he stumbled to his feet, it was all over.

The League ship was a wreck of fused metal. The three cruisers that had destroyed it were landing. Even as they touched the ground, their small guns flicked deadly explosive pellets that picked off the dazed League soldiers who still sought to fight.

Gordon found himself standing, his late captors a heap of torn, blasted corpses less than a hundred feet away. The doors of the cruisers were sliding open, and men in gray helmets and uniforms came running toward Gordon.

"Prince Zarth, you're not hurt?" cried their leader to Gordon.

The man was big and burly, with bristling black hair and a craggy, knobby face whose complexion was faintly copper-red. His black eyes were snapping with cheerful excitement.

"I'm Hull Burrel, captain commanding a Sirius-sector patrol," he told Gordon, saluting. "Our radar spotted an unauthorized vessel approaching Earth, and we followed it to find it at your laboratory here."

He glanced at the dead men. "Cloud-men, by Heaven! Shorr Kan has dared send men to abduct you! This could be cause for war!"

JOHAN GORDON thought swiftly. These excited Empire officers also naturally took him for the son of their ruler.

And he couldn't tell them the truth, couldn't tell them he was John Gordon in Zarth Arn's body! For Zarth Arn had made him promise to tell that to no one, had warned that to do so would mean disaster! He'd have to keep up the strange imposture with these men until rid of them.

"I'm not hurt," Gordon said unsteadily. "But they shot Vel Quen and I'm afraid he's dead."

They hurried with him to the tower.

He ran hastily up the stairs and bent over the old scientist.

One look was enough. A gaping hole had been blasted in Vel Quen's body by the explosion of the tiny atomic pellet.

Gordon was appalled. The death of the old scientist meant that he was now completely on his own in this unfamiliar future universe.

Could he ever get back to his own body and time? Vel Quen had thoroughly explained the principle and operation of the mind-projecting apparatus. He might be able to operate it if he could get into telepathic contact with the real Zarth Arn.

Gordon quickly made up his mind. It was vital for him to stay here in the tower with the apparatus which alone could restore him to his own body and time.

"I must report this attack at once to your father, Prince Zarth," the captain named Hull Burrel was saying.

"There is no need," Gordon said quickly. "The danger is over. Keep the whole matter confidential."

He expected his authority as son of the sovereign to overawe the captain. But Hull Burrel, surprise on his craggy copper face, demurred.

"It would be a breach of duty if I failed to report so serious a matter as a League raid like this!" the captain protested.

He went to the telestereo and touched its switches. In a moment on its receiver-plate appeared the image of a uniformed officer.

"Chief of Fleet Operations speaking from Thron," he said crisply.

"Captain Hull Burrel of the Sirius-sector patrol wishes to report a matter of the utmost importance to his highness, Arn Abbas," declared the big copper captain.

The official stared. "Cannot the

matter be submitted to Commander Corbulo?"

"It cannot—its importance and urgency are too great," Hull Burrel declared. "I take the responsibility for insisting on this audience."

There was a little wait. Then on the telestereo the image of a different man flashed into being.

HE WAS a massive giant well past middle age, with shaggy, bristling brows over penetrating, hard gray eyes. He wore a brilliantly embroidered cloak over a dark jacket and trousers, and his great, graying head was bare.

"Since when do mere naval captains insist—," he began angrily, and then as his image looked past Hull Burrel he caught sight of John Gordon. "So this concerns you, Zarth? What's wrong?"

Gordon realized that this massive, bleak-eyed man was Arn Abbas, sovereign of the Mid-Galactic Empire and Zarth Arn's father—*his* father.

"It's nothing serious," Gordon began hastily, but Hull Burrel interrupted.

"Your pardon, Prince Zarth, but this *is* serious!" He continued to the emperor. "A League phantom-cruiser slipped in to Earth and made an attempt to kidnap the prince. By chance my patrol was making an unscheduled stop at Sol, and we detected them by radar and followed them here just in time to destroy them."

Arn Abbas uttered an angry roar. "A League warship violating Empire space? And trying to kidnap my son? Curse that devil Shorr Kan for his insolence! He's gone too far this time!"

Hull Burrel added, "We weren't able to take any of the Cloud-men alive but Prince Zarth can give you the details of the attempt."

Gordon wanted above all else to minimize the whole thing and finish the nerve-racking strain of having to keep

up this imposture.

"It must have been just a surprise sneak attempt," he said hastily to Arn Abbas. "They won't dare try it again—I'll be in no more danger here."

"No danger? What are you talking about?" rumbled Arn Abbas angrily. "You know as well as I do why Shorr Kan was trying to get his hands on you, and what he'd have done if he succeeded!"

The massive ruler continued commandingly to Gordon. "You're not going to stay there on Earth any longer, Zarth! I've had enough of your slipping away to that remote old planet for your crazy secret scientific studies. This is what comes of it! We'll take no more such chances! You're going to come here to Throon at once!"

John Gordon's heart sank. To Throon, the royal planet of the sun Canopus which lay nearly halfway across the galaxy? He couldn't go there!

He couldn't carry on this masquerade in Zarth Arn's body at the court itself! And if he left the laboratory here, he'd have no chance of contacting Zarth Arn and re-exchanging their bodies.

"I can't come to Throon now," Gordon protested desperately. "I have to remain here on Earth for a few days more to carry out my researches."

Arn Abbas uttered a bellow of anger. "You do as I say, Zarth! You'll come to Throon and you'll come right now!"

And the emperor swung his angry gaze to Hull Burrel and ordered, "Captain, bring the prince here at once in your cruiser. And if he refuses, bring him here under guard!"

CHAPTER IV

Magic Planet

THE big cruiser sped through the interstellar spaces at a velocity al-

ready hundreds of times that of light. Earth and Sol had hours before receded astern. Ahead of the ship expanded the heart of the galaxy, thick with glittering star-swarms.

John Gordon stood in the wide, many-windowed bridge of the *Caris* with Hull Burrel and two helmsmen, feeling a quaking inward awe as he looked at that incredible vista ahead. The enormous speed of the warship was evidenced by the fact that the stars ahead grew visibly brighter as he watched.

Gordon felt no acceleration, thanks to the dim, blue-glowing stasis of force that cradled everything in the ship. He tried to remember what he had learned about the motive power of these great ships. They were propelled by an energy drive which utilized the famous sub-spectrum rays that were the basis of galactic civilization.*

*Note: Gordon's study of the history of two hundred thousand years had shown him how the entire structure of galactic civilization was based upon that epochal discovery of sub-spectrum rays.

The era of space-travel had really dawned in 1945 and '46, with the first release of atomic energy and the discovery that radar could function efficiently in space. By the end of the 20th Century, atomic-powered rockets guided by radar had reached the Moon, Mars and Venus.

Interplanetary exploration and exploitation had increased rapidly. But the vast distances to other stars remained unconquerable until late in the 22nd Century, when three great inventions made interstellar travel possible.

The most important of the three was the discovery of sub-spectrum rays. These were hitherto unsuspected octaves of electromagnetic radiation far below even the gamma and cosmic rays in wavelength, and which had velocities vastly greater than the speed of light.

Of these sub-spectrum rays the most useful were the so-called pressure rays in the Minus-30th octave of the spectrum, which could react against the tenuous cosmic dust of space with a powerful pressure. These pressure rays formed the driving power of star-ships. They were produced in generators powered by atomic turbines, and were jetted from the stern of a ship to drive it thousands of times faster than light.

The second vital invention was that of the mass-control. Einstein's equations had shown that if a ship travelled as fast as light, its mass

"It still seems crazy of Shorr Kan to send a League cruiser into our realm on such an errand!" Hull Burrel was saying. "What good would it do him if he did manage to capture you?"

Gordon had wondered about that himself. He couldn't see the reason for wanting to capture the mere second son of the emperor.

"I suppose," he ventured, "that Shorr Kan figured he could use me as a hostage. I'm glad you got the murderous devils, for killing Vel Quen."

To forestall the strain of further conversation, Gordon turned abruptly. "I think I'd like to rest, captain."

With a quick word of apology, Hull Burrel led the way from the bridge and down by narrow corridors and catwalks through the ship.

would expand to infinity. This difficulty was overcome by the mass-control, which "bled" off mass as energy to maintain a constant mass unaltered by velocity. The energy thus obtained was stored in accumulators and fed back automatically whenever speed was reduced.

The final invention concerned the human element. Men's bodies would have been unable ordinarily to withstand those vast accelerations, but this obstacle was conquered by the cradle-stasis. This was a stasis of force which gripped every atom in a ship. The energy-drive jets gave their thrust, not to the ship directly, but to its stasis. Thus everyone and everything in the ship remained unaffected by acceleration. Magnetic apparatus furnished artificial gravity on shipboard, similar to that of the tiny gravitation-equalizers worn by all star-travellers.

The fastest of the sub-spectrum rays, those of the Minus-42nd Octave, were so speedy that they made light seem to crawl. These super-speed rays were used in telescope communication and also in the vital function of radar for the star-ships.

Using these inventions to build star-ships, mankind took at once to interstellar space. Alpha Centauri, Sirius and Altair were quickly visited. Colonies were soon established on suitable star-worlds. For some 10,000 years, Sol and Earth remained the center of government of a growing region of colonized stars.

Until then, there had been no serious conflicts. Aboriginal alien races of intelligence had been found at some star-systems and were helped and educated, but there was found no scientific civilization on any star-world. That had been ex-

Gordon pretended to glance only casually about him, but was really devoured by interest in what he saw. There were long, narrow galleries of atomic guns, navigation rooms and radar rooms on this upper deck.

Officers and men whom they met snapped to attention, saluting him with deep respect. These men of the Mid-Galactic Empire differed in complexion, some of them faintly blue of skin, others reddish, others tawny yellow. He knew it was because they came from different star-systems, and had learned that Hull Burrel himself was an Antarian.

Hull Burrel slid open the door of an austere little room. "My own cabin, Prince Zarth. I beg you'll use it till we reach Throon."

Left alone, John Gordon felt a slight relaxing of the extreme tension under

pected, for if such a race existed it would have visited us long before we ourselves had conquered space.

But in the year 12,455, a group of star-systems near Polaris complained that Earth was too remote to appreciate their problems, and they set up an independent kingdom. By 39,000, the kingdoms of Lyra, Cygnus, and the Baronies of the great Hercules Cluster had declared independence.

Criminals and fugitives from the law seeking refuge in the Cloud eventually founded the League of Dark Worlds. By 120,000, the star-kingdoms were many. But the biggest was still the Mid-Galactic Empire, and hosts of star-worlds remained loyal to it. For convenience its government had been shifted in 62,339 from Earth to a world of the great sun Canopus.

The Empire took the lead of the star-kingdoms in the year 129,411 when the galaxy was suddenly invaded by alien and powerful creatures from the Magellanic Clusters outside. And after that invasion was repelled the Empire had steadily grown by exploring and colonizing the wild, unmapped star-systems in the frontier regions called the Marches of Outer Space.

Thus when Gordon found himself in the galaxy of this year 202,115, he found its star-kingdoms already old in traditions and history. Many wars had been fought between them, but the Empire had steadily sought to prevent such sanguine galactic struggles and to unify them in peace. But now the ominous growth of the League of Dark Worlds had reached a point where the safety of the Empire itself was challenged. . . . Ed.

which he had been laboring for hours.

They had left Earth as soon as Vel Quen's burial was over. And every moment of the hours since then had impressed on Gordon the vital necessity of playing a part.

HE COULD not tell the weird truth about himself. Zarth Arn had insisted that to tell anyone would bring disaster on both Gordon and himself. Why was it so dangerous? Gordon couldn't guess, as yet.

But he was sure that he must heed that warning, must let no one suspect that he was the prince only in physical body. Even if he told, they wouldn't believe him! Old Vel Quen had said that Zarth Arn's weird experiments had been wholly secret. Who would credit such a crazy story?

Gordon had determined that his only possible course of action was to play the part of Zarth Arn as best he could at Throon, and return as soon as possible to the tower-laboratory on Earth. Then he could plan a way to re-effect the exchange of minds.

"But it seems that I'm being sucked into some crazy tangle of galactic conflict that'll make it hard to get away," he thought, dismayed.

Lying on the padded bunk, Gordon wondered wearily if any man since time began had ever found himself in such a situation as this.

"There's nothing for it but to bull ahead and play it out as Zarth Arn, if I can," he thought. "If Vel Quen had only lived!"

He felt again a pang of regret for the old scientist. Then, tired and unstrung, he fell asleep.

When Gordon awoke, he unconsciously expected to see the familiar plaster ceiling of his New York apartment overhead. Instead, he looked at a glittering metal ceiling and heard a

deep, steady drone.

He realized then it had been no wild dream. He was still in Zarth Arn's body, in this big warship that was racing through the galaxy toward a doubtful reception for himself.

A uniformed man who bowed respectfully when he entered brought him food—an unfamiliar red substance that seemed to be synthetic meat, fruit, and the chocolate-like drink he already knew.

Hull Burrel came in then. "We're making almost two hundred parsecs an hour and will reach Canopus in three days, highness."*

Gordon did not venture any reply other than a nod. He realized how fatally easy it would be to make slips of pure ignorance.

That possibility was a weight on his mind in the hours that followed, adding to the already superhuman strain of his imposture.

He had to go through the big cruiser as though such a ship was familiar to him, he had to accept references to a thousand things which Zarth Arn would know, without betraying his ignorance.

He carried it off, he hoped, by wrapping himself in brooding silence. But could he carry it off at Throon?

On the third day, John Gordon entered the spacious bridge to be dazzled by a blinding flare of light that forced a way even through the heavy filter-screens across the windows.

"Canopus at last," remarked Hull Burrel. "We shall dock at Throon in a few hours."

Again, wild bugle-calls of excitement soared in Gordon's mind as he looked through the windows at a tremendous spectacle.

*Note: A parsec was the term invented by 20th Century Earth astronomers to measure galactic distances. It equalled a distance of 3.258 light-years, or 18,000,000,000,000 miles.

It was *worth* all risk and danger, it was worth that nightmare traverse from body to body across the gulf of time, for a man of the 20th Century to look on such a sight as this!

The majesty of Canopus was a thundering impact on his senses. The colossal sun revised all his limited ideas of grandeur. It blazed here in white splendor like a firmament aflame, drenching the warship and all space with a glorious, supernal radiance.

Gordon's senses reeled, as he tried to keep his face impassive. He was only a man of the past and his brain was not used to such shock of wonder as this.

THE drone of the great pressure-ray generators dropped in key as the cruiser swung in around an Earth-sized planet that was one of a dozen worlds circling this monster star.

And this was Throon. This world of green continents and silver seas spinning in opalescent white sunshine was the heart and brain of the Empire that stretched half across the galaxy.

"We'll dock at Throon City, of course" Hull Burrel was saying. "Commander Corbulo has stereored me to bring you to Arn Abbas at once."

Again, Gordon tensed. "I will be glad to see my father," he ventured.

His father? A man he had never seen, a ruler who governed the titan expanse of suns and worlds behind him, and who was parent of the man in whose physical body Gordon now lived?

Again, Zarth Arn's remembered warning steadied Gordon. Tell no one the truth—*no one!* Brazen through this incredible imposture somehow, and get back to Earth for the re-exchange as soon as he could—

The silvery seas and green continents of Throon rushed up toward the *Caris* as the warship made planet-fall with massive disregard of preliminary

deceleration.

Gordon caught his breath as he looked down. From the edge of a silver ocean rose a lofty range of mountains that flashed and glittered as though of glass. They *were* of glass, he saw a moment later, a towering range formed by extrusion of vast masses of molten silicates from the planet.

And perched on a plateau of these Glass Mountains high above the sea was a fairy, unreal city. Its graceful domes and towers were like bubbles of colored glass themselves. Pinnacles and terraces took the light of Canopus and flashed it back in a glory of quivering effulgence. Throon City, this—the core and capital of the Empire.

The big cruiser sank toward a huge spaceport just north of the fairy city. In its sunken docks and quays brooded scores, hundreds, of the Empire's star-roving warships. Massive, thousand-foot long battleships, heavy cruisers, fast destroyers and slim phantom-cruisers and ponderous, tub-shaped monitors with huge guns—all these craft wore the shining comet-emblem of the Mid-Galactic Empire.

Gordon stepped out of the *Caris* with Hull Burrel and the respectful officers, into sunlight so weirdly white and beautiful that not even the urgency of his situation prevented him looking about in increased wonder.

The brooding bulks of the great battleships loomed up in the docks all around him, their batteries of grim atom-guns silhouetted against the sky. In the distance rose the incredible, shimmering domes and spires of the city.

Hull Burrel's puzzled voice jerked Gordon from his petrification, recalling him to the necessities of the present.

"The car is waiting for us in the tubeway, highness," reminded the Antarian captain.

"Of course," Gordon said hastily, forcing himself to move.

He had to watch the trend of Hull Burrel's direction, so as not to go astray. They made their way between the looming ships, past great mobile cranes, respectfully saluting officers, uniformed men standing at rigid attention.

Every minute John Gordon felt more strongly the hopelessness of what he had set out to do. How could he maintain his impersonation, when everything here was so stunningly new and strange?

"Disaster for both of us if you tell!" That warning of Zarth Arn—the real Zarth Arn—rang through his mind again with a chilling, steadying effect.

"Bull it through!" he told himself. "They can't dream that you're not the prince, no matter what mistakes you make. Watch every moment—"

THEY reached the opening of a lighted stair that led down beneath the tarmac of the spaceport. Below were round metal tunnels branching off into the darkness. A cylindrical metal car waited.

No sooner had Gordon and Hull Burrel taken their places in its pneumatic-slung chairs, than the car started moving with great speed. Its velocity was so great that to Gordon it seemed barely five minutes before they stopped.

They stepped out into a similar lighted, underground vestibule. But here uniformed guards with slim, rifle-like atom-guns were on duty. They saluted with the weapons to Gordon.

A young officer, saluting likewise, informed Gordon, "Throon rejoices at your return, highness."

"There's no time now for civilities," Hull Burrel broke in impatiently.

Gordon walked with the Antarian captain to an open doorway beyond

which lay a corridor with alabaster walls.

The floor of the corridor began to move smoothly as they stepped onto it, almost startling Gordon into an exclamation. As it bore them forward and up long, winding ramps, Gordon numbly comprehended that they were already in the lower levels of Arn Abbas' palace.

The very nerve-center of the vast star-empire whose rule swayed suns and worlds across thousands of light-years! He couldn't yet fully grasp and realize it or the coming ordeal.

The moving walk swept them into an antechamber in which another file of guards saluted and stood apart from high bronze doors. Hull Burrel stood back as Gordon went through into the room beyond.

It was a small room wholly without magnificence. Around its walls were many telostereo instruments, and there was a curious low desk with a panel of grids and screens on its face.

Behind the desk a man sat in a metal chair, with two other men standing beside him. All three looked at Gordon as he approached. His heart hammered violently.

The man in the chair was a giant, dominating figure in dull-gold garments. His massive, powerful face, bleak gray eyes and thick black hair graying at the temples gave a leonine impression.

Gordon recognized him as Arn Abbas, ruler of the Empire, Zarth's father. No, *his* father! He had to keep thinking of it that way!

The younger of the two standing men was like Arn Abbas himself, thirty years younger—tall and stalwart but with more friendliness in his face. That would be Jhal Arn, his elder brother, he guessed.

And the third man, grizzled, stocky,

square-faced, wearing the uniform of the Empire navy but with golden bars of rank thick on his sleeve—this must be Chan Corbulo, the Commander of the space fleet.

Gordon, his throat tight with tension, stopped in front of the seated man. He nerved himself against those bleak eyes, knowing that he had to speak.

"Father—," he began tightly. Instantly, he was interrupted.

Arn Abbas, glaring at him, uttered an exclamation of wrath.

"Don't call me father! You're not my son!"

CHAPTER V

Weird Masquerade

GORDON felt a staggering shock. Could Arn Abbas suspect the weird impersonation he was carrying on?

But the next words of the giant ruler a little reassured Gordon, even though they were furious in tone.

"No son of mine would go straying off to the edge of the Empire to play scientific hermit for months, when I need him here! Your cursed science-studies have made you utterly forget your duty."

Gordon breathed a little more easily. "Duty, father?" he repeated.

"Duty to me and to the Empire!" roared Arn Abbas. "You know that I need you here. You know the game that's being played across the galaxy, and what it means to all our star-worlds!"

His big fist pounded his knee. "And see what burying yourself there on Earth nearly brought about! Shorr Kan nearly scooped you up! You know what that would mean?"

"Yes, I know," Gordon nodded. "If Shorr Kan had got hold of me, he could

use me as a hostage against you."

Next moment, he realized that he had blundered. Arn Abbas glared at him, and Jhal Arn and Corbulo looked surprised.

"What in the name of all the star-devils are you talking about?" demanded the emperor. "You should know as well as I why Shorr Kan wanted his hands on you. To get the secret of the Disruptor, of course!"

The Disruptor? What was that? Gordon desperately realized that again his ignorance had betrayed him.

How *could* he keep going in this mad imposture when he didn't know the vital facts about Zarth Arn's life and background?

Gordon might have blurted out the truth then and there had not remembrance of his promise to Zarth Arn steadied him. He tried to look unruffled.

"Of course—the Disruptor," he said hastily. "That's what I was referring to."

"You certainly did not sound like it!" snapped Arn Abbas. He uttered a fierce exclamation. "By Heaven, at a time when I need sons to help me, I've got one real son and I've got another who's so cursed dreamy-eyed he doesn't even remember the Disruptor!"

The massive ruler leaned forward, anger dissolving momentarily into an earnestness that betrayed his deep anxiety.

"Zarth, you've got to wake up! Do you realize that the Empire stands on the verge of a terrible crisis? Do you realize just what that devil Shorr Kan is planning?"

"He's sent ambassadors to the Hercules Barons, to the kingdoms of Polaris and Cygnus, even to Fomalhaut Kingdom. He's doing everything to detach our allies from us. And he's building every new warship and weapon he

can, there inside the Cloud."

Grizzled Commander Corbulo nodded grimly. "It's certain vast preparations are going on inside the Cloud. We know that, even though our scanner-beams can't get through the screens that Shorr Kan's scientists have flung around their work."

"It's the dream of his life to crack the Empire and reduce the galaxy to a ruck of small warring kingdoms that the League could devour one by one!" Arn Abbas went on. "Where *we* are trying to unify the galaxy in peace, he wants to split and separate it."

"Only one thing holds Shorr Kan back and that is the Disruptor. He knows we have it, but he doesn't know just what it is or what it can do, any more than anyone else does. And because only you and Jhal and I know the secret of the Disruptor, that arch-devil has tried to get his hands on you!"

LIGHT broke upon John Gordon's mystification. So that was what the Disruptor was—some mysterious weapon whose secret was known only to three men of the Empire's ruling house?

Then Zarth Arn knew that secret. But *he* didn't know it, even though he wore Zarth Arn's body! Yet he had to pretend that he did.

"I never thought of it that way, father," Gordon said hesitatingly. "I know the situation is critical."

"So critical that things may well come to a crisis within weeks!" affirmed Arn Abbas. "It all depends on how many of our allied kingdoms Shorr Kan is able to detach, and whether he will dare to risk the Disruptor."

He added loudly, "And because of that, I forbid you to go back to your hideout on Earth any more, Zarth! You'll stay here and do your duty as the second prince of the Empire

should."

Gordon was appalled. "But father, I've got to go back to Earth for at least a short time—"

The massive ruler cut him off. "I told you I forbade it, Zarth! Do you dare to argue with me?"

Gordon felt the crash of all his desperate plans. This was disaster.

If he couldn't go back to Earth and the laboratory there, how could he contact Zarth Arn and re-exchange their bodies?

"I'll hear no more objections!" continued the emperor violently as Gordon started to speak. "Now get out of here! Corbulo and I have things to discuss."

Blindly, helplessly, Gordon turned back toward the door. More strongly than even before, he felt a dismayed consciousness of being utterly trapped and baffled.

Jhal Arn went with him, and when they had reached the ante-chamber the tall elder prince put his hand on Gordon's arm.

"Don't take it too hard, Zarth," he encouraged. "I know how devoted you are to your scientific studies, and what a blow Vel Quen's death must have been to you. But father is right—you are needed here, in this gathering crisis."

Gordon, even in his dismay, had to choose his words. "I want to do my duty. But what help can I give?"

"It's Lianna that father is referring to," Jhal Arn said seriously. "You *have* dodged your duty there, Zarth."

He added, as though anticipating objections from Gordon, "O, I know why—I know all about Murn. But the Fomalhaut Kingdom is vital to the Empire in this crisis. You'll have to go through with it."

Lianna? Murn? The names had no meaning to John Gordon. They

were mystery, like everything else in this mad imposture.

"You mean that Lianna—," he began, and left the words hanging in hope of provoking further explanation from Jhal Arn.

But Jhal only nodded. "You've got to do it, Zarth. Father is going to make the announcement at the Feast of Moons tonight."

He clapped Gordon on the back. "Buck up, it's not as bad as all that! You look as though you'd been condemned to death. I'll see you at the Feast."

He turned back into the inner room, leaving Gordon staring blankly after him.

Gordon stood, bewildered and badly worried. What kind of tangled complications was his involuntary impersonation of Zarth Arn getting him into? How long could he hope to carry it through?

HULL BURREL had gone into the inner room when Gordon came out. Now as Gordon stood frozenly, the big Antarian came out too.

"Prince Zarth, I owe you good fortune!" he exclaimed. "I expected to get reprimanded by Commander Corbulo for putting off my regular patrol course to touch at Sol."

"And he didn't reprimand you?" Gordon said mechanically.

"Sure he did—gave me the devil with bells on," Burrel grinned. "But your father said it turned out so lucky in giving me a chance to rescue you, that he's appointed me aide to the Commander himself!"

Gordon congratulated him. But he spoke perfunctorily, for his mind was upon his own desperately puzzling position.

He couldn't just stand here in the ante-room longer. Zarth Arn must have

apartments in this great palace, and he'd be expected to go to them. The devil of it was he had no idea where they were!

He couldn't let his ignorance be suspected, though. So he took leave of Hull Burrel and walked confidently out of the ante-room by a different door, as though he knew quite well where he was going.

Gordon found himself in a corridor, on a gliding motowalk. The motowalk took him into a great circular room of shining silver. It was brilliantly illuminated by white sunlight pouring through high crystal windows. Around its walls marched black reliefs depicting a wilderness of dark stars, embers of burned out suns and lifeless worlds.

John Gordon felt dwarfed by the majesty and splendor of this great, somber chamber. He crossed it and entered another vast room, this one with walls that flamed with the glowing splendor of a whirling nebula.

"Where the devil are Zarth Arn's quarters in this place?" he wondered.

He realized his helplessness. He couldn't ask anyone where his own quarters were. Neither could he wander aimlessly through this vast palace without arousing wonder, perhaps suspicion.

A gray-skinned servant, a middle-aged man in the black livery of the palace, was already looking at him wonderingly across this Hall of the Nebula. The man bowed deeply as Gordon strode to him.

Gordon had had an idea. "Come with me to my apartments," he told the servant brusquely. "I have a task for you."

The gray man bowed again. "Yes, highness."

But the man remained there, waiting. Waiting for him to walk ahead, of course!

Gordon made an impatient gesture. "Go ahead! I'll follow."

If the servant found it strange he let none of that feeling appear in his masklike face. He turned and proceeded softly out of the great nebula room by another door.

Gordon followed him into a corridor and onto a motowalk that glided upward like a sliding ramp. Swiftly and quietly the moving walk took them up through splendid, lofty corridors and stairs.

Twice they confronted groups coming downward by the return walk—two brilliantly-jewelled white girls and a laughing, swarthy naval captain in one; two grave gray officials in the other. All of them bowed in deep respect to Gordon.

The motowalk switched off down a shimmery, pearl-walled passageway. A door ahead slid softly open of its own accord. Gordon followed through it into a high chamber with pure white walls.

The gray servant turned inquiringly toward him. "Yes, highness?"

How to get rid of the man? Gordon cut that problem short by taking the easiest method.

"I find I won't need you after all," he said carelessly. "You may go."

THE man bowed himself out of the room, and Gordon felt a slight relaxing of his tension. Clumsy, his stratagem—but at least it had got him to the temporary refuge of Zarth Arn's apartments.

He found himself breathing heavily as though from exhausting effort. His hands were shaking. He had not realized the nervous effort his impersonation cost him. He mopped his brow.

"My God! Was any man ever in a position like this before?"

His tired mind refused to grapple

with the problem now. To evade it, he walked slowly through the rooms of the suite.

Here was less splendor than he had seen elsewhere in the great palace. Apparently, Zarth Arn had not been of luxurious tastes. The rooms were comparatively austere.

The two living rooms had silken hangings and a few pieces of metal furniture of beautiful design. There was a rack of hundreds of thought-spools and one of the thought-spool "readers." A side room held much scientific apparatus, was in fact a small laboratory.

He glanced into a small bedroom, then went on toward tall windows that opened on a terrace gay with green verdure and flooded by sunlight. Gordon went out onto the terrace, and then froze.

"Throon City! Good Lord, who ever dreamed of a place like *this*!"

The little garden-terrace of his suite was high in the west wall of the huge, oblong palace. It looked out across the city.

City of the great star-empire's glory, gathering in itself an epitome of the splendor and power of that vast realm of many thousand star-worlds! Metropolis of grandeur so great that it stunned and paralyzed the eyes of John Gordon of little Earth!

The enormous white disk of Canopus was sinking toward the horizon, flashing a supernal brilliance across the scene. In that transfiguring radiance, the peaks and scarps of the Glass Mountains here above the sea flung back the sunset in banners and pennons of wild glory.

And outshining even the stupendous glory of the glassy peaks shone the fairy towers of Throon. Domes, minarets, graceful porticoes, these and the great buildings they adorned were of

shimmering glass. Mightiest among the structures loomed the gigantic palace on whose high terrace he stood. Surrounded by wondrous gardens, it looked out royally across the great metropolis and the silver ocean beyond.

In the radiant sunset out there over the glittering peaks and heaving ocean there flitted swarms of fliers like shining fireflies. From the spaceport to the north, a half-dozen mighty battle-ships rose majestically and took off into the darkening sky.

The full grandeur and vastness of this star-empire hammered into Gordon's mind. For this city was the throbbing heart of those vast glooms and linked stars and worlds across which he had come.

"And I am supposed to be one of the ruling house of this realm!" he thought, dazed. "I can't keep it up. It's too vast, too overpowering—"

The enormous sun sank as Gordon numbly watched. Violet shadows darkened to velvet night across the metropolis.

Lights came on softly all through the glittering streets of Throon, and on the lower terraces of this giant palace.

TWO golden moons climbed into the heavens, and hosts of countless stars broke forth in a glory of unfamiliar constellations that rivalled the soft, throbbing lights of the city.

"Highness, it grows late!"

Gordon turned jerkily, startled. A grave servant, a stocky man with bluish skin, was bowing.

One of Zarth Arn's personal servants, he guessed. He would have to be careful with this man!

"Yes, what of that?" he asked, with an assumption of impatience.

"The Feast of Moons will begin within the hour," reminded the servant. "You should make ready, highness."

Gordon suddenly remembered what Jhal Arn had said of a Feast. A royal banquet, he guessed, to be held this night.

What was it Jhal had said of some announcement that Arn Abbas was to make? And what had been the talk of "Murn" and "Lianna" and his duty?

Gordon braced himself for the ordeal. A banquet meant exposing himself to the eyes of a host of people—all of whom, no doubt, knew Zarth Arn and would notice his slightest slip. But he had to go.

"Very well, I will dress now," he told the servant.

It was at least a slight help that the blue-skinned servitor procured and laid out his garments for him. The jacket and trousers were of silky black, with a long black cloak to hang from his shoulders.

When he had dressed, the servant pinned on his breast a comet-emblem worked in wonderfully-blazing green jewels. He guessed it to be the insignia of his royal rank in the Empire.

Gordon felt again the sense of unreality as he surveyed his unfamiliar figure, his dark, aquiline face, in a tall mirror.

"I need a drink," he told the servant jerkily. "Something strong."

The blue servant looked at him in faint surprise, for a moment.

"*Sagua*, highness?" he asked, and Gordon nodded.

The brown liquor the man poured out sent a fiery tingle through Gordon's veins.

Some of the shaky strain left his nerves as he drank another goblet of the *sagua*. He felt a return of reckless self-confidence as he left the apartment.

"What the devil!" Gordon thought. "I wanted adventure—and I'm getting it!"

More adventure than he had bar-

gained for, truly! He had never dreamed of such an ordeal as was now ahead of him—of appearing before the nobility of this star-flung Empire as its prince!

All the mammoth, softly-lit palace seemed astir with soft sound and laughter and movement, as streams of brilliantly-garbed men and women moved along its motowalks. Gordon, to whom they bowed respectfully, noted their direction and went forward casually.

The gliding walks took him down through the lofty corridors and halls to a broad vestibule with wonderful golden walls. Here councillors, nobles, men and women high in the Empire, drew aside for him.

Gordon nerved himself, strode toward the high doors whose massive golden leaves were now thrown back. A silk-garbed chamberlain bowed and spoke clearly into the vast hall beyond.

"His highness, Prince Zarth Arn!"

CHAPTER VI

The Feast of Moons

GORDON stopped stock still, shaken by an inward quaking. He stood on a wide dais at the side of a circular hall that was of cathedral loftiness and splendor.

The vast, round room of black marble held rows of tables which themselves glowed with intrinsic light. They bore a bewildering array of glass and metal dishes, and along them sat some hundreds of brilliantly-dressed men and women.

But not all these banqueters were human! Though humans were dominant, just as they were throughout the galaxy, there were also representatives of the Empire's aboriginal races. Despite their conventional garb, those

he could see clearly looked grotesquely alien to Gordon—a frog-like, scaly green man with bulging eyes, a beaked, owl-faced winged individual, two black spidery figures with too many arms and legs.

John Gordon's dazed eyes lifted, and for a moment he thought this whole vast room was open to the sky. High overhead curved the black vault of the night heavens, gemmed with thousands of blazing stars and constellations. Into that sky, two golden moons and one of pale silver hue were climbing toward conjunction.

It took a moment for Gordon to realize that that sky was an artificial planetarium-ceiling, so perfect was the imitation. Then he became aware that the eyes of all these folk had turned upon him. On the dais, there was a table with with a score of brilliant people, Jhal Arn's tall figure had risen and was beckoning impatiently to him.

Jhal Arn's first words shocked him back to realization of how badly his caution and self-control had slipped.

"What's the matter, Zarth? You look as though you'd never seen the Hall of Stars before!"

"Nerves, I guess," Gordon answered huskily. "I think I need another drink."

Jhal Arn burst into laughter. "So you've been fortifying yourself for tonight? Come, Zarth, it isn't that bad."

Gordon numbly slid into the seat to which Jhal Arn had led him, one separated by two empty chairs from the places where Jhal sat with his lovely wife and little son.

He found grizzled Commander Corbulo on his other side. Across the table sat a thin, nervous-eyed and aging man whom he soon learned was Orth Bodmer, Chief Councillor of the Empire.

Corbulo, a stern figure in his plain uniform, bowed to Gordon as did the

other people along this raised table.

"You're looking pale and downcast, Zarth," rumbled the grizzled space-admiral. "That's what you get, skulking in laboratories on Earth. Space is the place for a young man like you."

"I begin to think you're right," muttered Gordon. "I wish to Heaven I was there now."

Corbulo grunted. "So that's it? Tonight's announcement, eh? Well, it's necessary. The help of the Fomalhaut Kingdom will be vital to us if Shorr Kan attacks."

What the devil were they talking about, John Gordon wondered bitterly? The names "Murn" and "Lianna" that Jhal Arn had mentioned, this reference to the Fomalhaut star-kingdom again—what did they portend?

Gordon found a servant bending obsequiously over his shoulder, and told the man, "*Saqua*, first."

The brown liquor spun his brain a little, this time. He was aware, as he drank another goblet, that Corbulo was looking at him in stern disapproval, and that Jhal Arn was grinning.

THE brilliant scene before him, the shining tables, the splendid human and unhuman throng, and the wonderful sky-ceiling of stars and climbing moons, held Gordon fascinated. So this was the Feast of Moons?

Music that rippled in long, haunting harmonies of muted strings and woodwinds was background to the gay, buzzing chatter along the glittering tables. Then the music stopped and horns flared a loud silver challenge.

All rose to their feet. Seeing Jhal Arn rising, Gordon hastily followed his example.

"His highness, Arn Abbas, sovereign of the Mid-Galactic Empire, Suzerain of the Lesser Kingdoms, Governor of the stars and worlds of the Marches of

Outer Space!

"Her highness, the Princess Lianna, ruler of the Kingdom of Fomalhaut!"

The clear, loud announcements gave John Gordon a shock of astonishment even before the giant, regal figure of Arn Abbas strode onto the dais, with a girl upon his arm.

So "Lianna" was a girl, a princess—ruler of the little western star-kingdom of Fomalhaut? But what had she to do with *him*?

Arn Abbas, magnificent in a blue-black cloak upon which blazed the glorious jewels of the royal comet-embell, stopped and turned his bleak eyes angrily on Gordon.

"Zarth, are you forgetting protocol?" he snapped. "Come here!"

Gordon stumbled forward. He got only a swift impression of the girl beside the emperor.

She was tall, though she did not look so beside Arn Abbas' giant height. As tall as himself, her slim, rounded figure perfectly outlined by her long, shimmering white gown, she held her ash-golden head proudly high.

Pride, beauty, consciousness of authority—these were what Gordon read in the chiselled white face, the faintly scornful red mouth, the cool, clear gray eyes that rested gravely on him.

Arn Abbas took Gordon's hand in one of his, and Lianna's in the other. The towering sovereign raised his voice.

"Nobles and captains of the Empire and our allied star-kingdoms, I announce to you the coming marriage of my second son, Zarth Arn, and the Princess Lianna of Fomalhaut!"

Marriage? Marriage to this proudly beautiful star-kingdom princess? Gordon felt as though hit by a thunderbolt.

So *that* was what Jhal Arn and Corbulo had been referring to? But good God, he couldn't go through with this! He wasn't Zarth Arn—

"Take her hand, you fool!" snarled the emperor. "Have you lost your wits?"

Numbly, John Gordon managed to grasp the girl's slim, ring-laden fingers.

Arn Abbas, satisfied, stalked forward to take his seat at the table. Gordon remained frozen.

Lianna gave him a sweet, set smile, but her voice was impatient as she said in an undertone, "Conduct me to our place, so that the others can sit down."

Gordon became aware that the whole host in the Hall of Stars remained standing, looking at himself and the girl.

He stumbled forward with her, clumsily handed her into her chair, and sat down beside her. There was the rustle of the hosts re-seating themselves, and the rippling music sounded forth again.

Lianna was looking at him with fine brows arched a little, her eyes clouded by impatience and resentment.

"Your attitude toward me will create gossip. You look positively appalled!"

GORDON nerved himself. He had to keep up his imposture for the time being. Zarth Arn was apparently being used as a political paw, was being shoved into this marriage and had agreed to it.

He had to play the real Zarth's part, for now. He'd find some way of getting back to Earth to exchange places with the real Zarth Arn, before the marriage.

He drained his *saqua* goblet again, and leaned toward Lianna with a sudden recklessness.

She expected him to be an ardent fiancé, to be Zarth Arn. All right, blast it, he would be! It was no fault of his if there was deception in it. He hadn't asked to play this role!

"Lianna, they're so busy admiring you that they don't even look at me,"

he told her.

Lianna's clear eyes became puzzled in expression. "I never saw you like this before Zarth."

Gordon laughed. "Why, then, there's a new Zarth Arn—Zarth Arn is a different man, now!"

Truth enough in that assertion, as only he knew! But the girl looked more perplexed, her fine brows drawing together in a little frown.

The feast went on, in a glow of warmth and color and buzzing voices. And the *saqua* Gordon had drunk swept away his last trace of apprehension and nervousness.

Adventure? He'd wanted it and he'd gotten it, adventure such as no man of his time had ever dreamed. If death itself were the end of all this, would he not still be gainer? Wasn't it worth risking life to sit here in the Hall of Stars at Throon, with the lords of the great star-kingdoms and a princess of far-off suns at his side?

Others beside himself had drunk deeply. The handsome, flushed young man who sat beyond Corbulo and whom Gordon had learned obliquely was Sath Shamar, ruler of the allied Kingdom of Polaris, crashed his goblet down to punctuate a declaration.

"Let them come, the sooner the better!" he was exclaiming to Corbulo. "It's time Shorr Kan was taught a lesson."

Commander Corbulo looked at him sourly. "That's true, highness. Just how many first-line battleships will Polaris contribute to our fleet, if it comes to teaching him that lesson?"

Sath Shamar looked a little dashed. "Only a few hundred, I fear. But they'll make up for it in fighting ability."

Arn Abbas had been listening, for the emperor's rumbling voice sounded from his throne-like seat on Gordon's right.

"The men of Polaris will prove their fidelity to the Empire, no fear," declared Arn Abbas. "Aye, and those of Fomalhaut Kingdom, and of Cygnus and Lyra and our other allies."

Sath Shamar flushedly added, "Let the Hercules Barons but do their part and we've nothing to fear from the Cloud."

Gordon saw all eyes turn to two men further along the table. One was a cold-eyed oldster, the other a tall, rangy man of thirty. Both wore on their cloaks the flaring sun-cluster emblem of Hercules Cluster.

The oldster answered. "The Confederacy of the Barons will fulfill all its pledges. But we have made no formal pledge in this matter."

Arn Abbas' massive face darkened a little at that cool declaration. But Orth Bodmer, the thin-faced chief Councillor, spoke quickly and soothingly to the cold-eyed Baron.

"All men know the proud independence of the great Barons, Zu Rizal. And all know you'd never acquiesce in an evil tyranny's victory."

ARN ABBAS, a few moments later, leaned to speak frowningly to Gordon.

"Shorr Kan has been tampering with the Barons! I'm going to find out tonight from Zu Rizal just where they stand."

Finally Arn Abbas arose, and the feasters all rose with him. The whole company began to stream out of the Hall of Stars into the adjoining halls.

Courtiers and nobles made way for Gordon and Lianna as they went through the throng. The girl smiled and spoke to many, her perfect composure bespeaking a long training in the regal manner.

Gordon nodded carelessly in answer to the congratulations and greetings.

He knew he was probably making many blunders, but he didn't care by now. For the first time since leaving Earth, he felt perfectly carefree as that warm glow inside him deepened.

That *sagua* was a cursed good drink! Too bad he couldn't take some of it back with him to his own time. But nothing material could go across time. That was a shame—

He found himself with Lianna on the threshold of a great hall whose fairy-like green illumination came from the flaming comets that crept across its ceiling "sky." Hundreds were dancing here to dreamy, waltz-like music from an unseen source.

Gordon was astounded by the dream-like, floating movements of the immeasurably graceful dance. The dancers seemed to hover self-suspended in the air each step. Then he realized that the room was conditioned somehow by anti-gravity apparatus to reduce their weight.

Lianna looked up at him doubtfully, as he himself realized crestfallenly that he couldn't perform a step of these floating dances.

"Let's not dance," Lianna said, to his relief. "You're such a poor dancer as I remember it, that I'd rather go out in the gardens."

Of course—the retiring, studious real Zarth Arn would be that! Well, so much the better.

"I greatly prefer the gardens," Gordon laughed. "For believe it or not, I'm an even poorer dancer than I was before."

Lianna looked up at him perplexedly as they strolled down a lofty silver corridor. "You drank a great deal at the Feast. I never saw you touch *sagua* before."

Gordon shrugged. "The fact is that I never drank it before tonight."

He uttered a low exclamation when

they emerged into the gardens. He had not expected such a scene of unreal beauty as this.

These were gardens of glowing light, of luminous color! Trees and shrubs bore masses of blossoms that glowed burning red, cool green, turquoise blue, and every shade between. The soft breeze that brought heavy perfume from them shook them gaily like a forest of shining flame-flowers, transcendently lovely.

Later, Gordon was to learn that these luminous flowers were cultivated on several highly radioactive worlds of the star Achernar, and were brought here and planted in beds of similarly radioactive soil. But now, suddenly coming on them, they were stunning.

Behind him, the massive terraces of the gigantic oblong palace shouldered the stars. Glowing lights flung boldly in step on climbing step against the sky! And the three clustered moons above poured down their mingled radiance to add a final unreal touch.

"Beautiful, beyond words," Gordon murmured, enthralled by the scene.

Lianna nodded. "Of all your world of Throon, I love these gardens the best. But there are wild, unpeopled worlds far in our Fomalhaut Kingdom that are even more lovely."

HER eyes kindled and for the first time he saw emotion conquer the regal composure of her lovely little face. "Lonely, unpeopled worlds that are like planets of living color, drenched by the wonderful auroras of strange suns! I shall take you to see them when we visit Fomalhaut, Zarth."

She was looking up at him, her ash-gold hair shining like a crown in the soft light.

She expected him to make love to her, Gordon thought. He was—or at least, she thought he was—her fiance, the

man she had chosen to marry. He'd have to keep up his imposture, even now.

Gordon put his arm around her and bent to her lips. Lianna's slim body was pliant and warm inside the shimmering white gown, and her half-parted lips were dizzily sweet.

"I'm a cursed liar!" Gordon thought, dismayed. "I'm kissing her because I *want* to, not to keep up my role!"

He abruptly stepped back. Lianna looked up at him with sheer amazement on her face.

"Zarth, what made you do that?"

Gordon tried to laugh, though that thrillingly sweet contact still seemed trembling through his nerves.

"Is it so remarkable for me to kiss you?" he countered.

"Of course it is—you never did before!" Lianna exclaimed. "You know as well as I that our marriage is purely a political pretense!"

Truth crashed into Gordon's mind like a blast of icy cold, sweeping the fumes of *saqua* from his brain.

He had made an abysmal slip in his imposture! He should have guessed that Lianna didn't *want* to marry Zarth Arn any more than he wanted to marry her—that it was purely a political marriage and they but two pawns in the great game of galactic diplomacy.

He had to cover up this blunder as best he could, and quickly! The girl was looking up at him with that expression of utter mystification still on her face.

"I can't understand you doing this when you and I made agreement to be mere friends."

Gordon desperately voiced the only explanation possible, one perilously close to the truth.

"Lianna, you're so beautiful I couldn't help it. Is it so strange I should fall in love with you, despite our agree-

ment?"

Lianna's face hardened and her voice had scorn in it. "You in love with me? You forget that I know all about Murn."

"Murn?" The name rang vaguely familiar in Gordon's ears. Jhal Arn had mentioned "Murn."

Once more, Gordon felt himself baffled by his ignorance of vital facts. He was cold sober now, and badly worried.

"I—I guess maybe I just had too much *sagua* at the Feast, after all," he muttered.

Lianna's amazement and anger had faded, and she seemed to be studying him with a curiously intent interest.

He felt relief when they were interrupted by a gay throng streaming out into the gardens. In the hours that followed, the presence of others made Gordon's role a little easier to play.

He was conscious of Lianna's gray eyes often resting on him, with that wondering look. When the gathering broke up and he accompanied her to the door of her apartments, Gordon was uneasily aware of her curious, speculative gaze as he bade her goodnight.

He mopped his brow as he went on the gliding motowalk to his own chambers. What a night! He had had about as much as one man could bear!

Gordon found his rooms softly lit, but the blue servant was not in evidence. He tiredly opened the door of his bedroom. There was a quick rush of little bare feet. He froze at sight of the girl running toward him, one he had never seen before.

She seemed of almost childish youthfulness, with her dark hair falling to her bare shoulders and her soft, beautiful little face and dark-blue eyes shining with gladness. A child? It was no child's rounded figure that gleamed whitely through the filmy robe she wore!

Gordon stood, stupefied by this final staggering surprise in an evening of surprises, as the girl ran and threw soft bare arms around his neck.

"Zarth Arn!" she cried. "At last you've come! I've been waiting so long!"

CHAPTER VII

Star-Princess

JOHN GORDON for the second time that night held in his arms a girl who thought he was the real Zarth Arn. But the dark-haired, lovely young girl who had thrown her arms around him was far different from the proud princess Lianna.

Warm lips pressed his own in eager, passionate kisses, as he stood bewildered. The dark hair that brushed his face was soft and perfumed. For a moment, impulse made Gordon draw her lithe figure closer.

Then he pushed her back a little. The beautiful little face that looked up at him was soft and appealing.

"You never told me that you had come back to Throon!" she accused. "I didn't know until I saw you at the Feast!"

Gordon stumbled for an answer. "I didn't have time. I—"

This final surprise of the day had staggered him badly. Who was this lovely young girl? One with whom the real Zarth Arn had been conducting an intrigue?

She was smiling up at him fondly, her little hands still resting on his shoulders.

"It's all right, Zarth. I came up right after the Feast and I've been waiting for you."

She snuggled closer. "How long will you be staying on Throon? At least, we'll have these few nights together."

Gordon was appalled. He had thought his fantastic imposture difficult before. But *this*—!

A name suddenly bobbed into his thoughts, a name that both Jhal Arn and Lianna had mentioned as though he knew it well. The name of "Murn." Was it the name of this girl?

He thought it might be. To find out, he spoke to her diffidently.

"Murn—"

The girl raised her dark head from his shoulder to look at him inquiringly.

"Yes, Zarth?"

So this *was* Murn? It was this girl of whom Lianna had mockingly reminded him. So that Lianna knew of his intrigue?

Well, the name was something, anyway. Gordon was trying to grope his way through the complexities of the situation. He sat down, and Murn promptly nestled in his lap.

"Murn, listen—you shouldn't be here," he began huskily. "Suppose you were seen coming to my apartment?"

Murn looked at him with astonishment in her dark blue eyes. "What difference does that make, when I'm your wife?"

His *wife*? Gordon, for the twentieth time that day, was smitten breathless by the sudden, complete destruction of his pre-conceived ideas.

How in Heaven's name could he keep up the part of Zarth Arn when he didn't know the most elementary facts about the man? Why hadn't Zarth Arn or Vel Quen told him these things?

Then Gordon remembered. They hadn't told him because it wasn't supposed to be necessary. It had never been dreamed that Gordon, in Zarth Arn's body, would leave Earth and come to Throon. That raid of Shorr Kan's emissaries had upset all the plan, and had introduced these appalling complications.

Murn, her dark head snuggled under his chin, was continuing in a plaintive voice.

"Even though I'm only your morganatic wife, surely there's nothing wrong about my being here?"

So that was it! A morganatic, an unofficial, wife! That custom of old had survived to the days of these star-kings!

FOR a moment, John Gordon felt a hot anger against the man whose body he inhabited. Zarth Arn, secretly married to this child whom he could not acknowledge publicly and at the same time preparing for a state marriage with Lianna—it was a nasty business!

Or was it? Gordons' anger faded. The marriage with Lianna was purely a political device to assure the loyalty of the Fomalhaut Kingdom. Zarth had understood that, and so did Lianna. She knew all about Murn, and apparently had not resented. Under those circumstances, was Zarth Arn not justified in secretly finding happiness with this girl he loved?

Gordon suddenly woke again to the fact that Murn did not doubt for a moment that *he* was her loved husband—and that she had every idea of spending the night here with him!

He lifted her from his lap and rose to his feet, looking down at her uncertainly.

"Murn, listen, you must not spend tonight here," he told her. "You will have to avoid my apartment for these next few weeks."

Murn's lovely face became pale and stricken. "Zarth, what are you saying?"

Gordon racked his brain for an excuse. "Now don't cry, please. It isn't that I don't love you any more."

Murn's dark blue eyes had filled with tears. "It's Lianna! You've fallen in

love with her. I saw how you paid attention to her at the Feast!"

The pain in her white face made it seem more childlike than ever. Gordon cursed the necessities of the situation. He was deeply hurting this girl.

He took her face between his hands. "Murn, you must believe me when I tell you this. Zarth Arn loves you as much as ever—his feelings have not changed."

Murn's eyes searched his face, and the intense earnestness in it and in his voice seemed to convince her. The pain left her face.

"But if that's so, Zarth, then why—"

Gordon had thought of an excuse, by now. "It's because of the marriage with Lianna, but *not* because I love the princess," he said.

"You know, Murn, that the marriage is designed to assure the support of the Fomalhaut Kingdom in the coming struggle with the Cloud."

Murn nodded her dark head, her eyes still perplexed. "Yes, you explained that to me before. But I still don't see why it should come between us. You said it wouldn't, that you and Lianna had agreed to regard it as a mere form."

"Yes, but right now we must be careful," Gordon said quickly. "There are spies of Shorr Kan here at Throon. If they discovered I have a secret morganatic wife, they could publish the fact and wreck the marriage."

Murn's soft face became understanding. "Now I see. But Zarth, aren't we going to see each other at all?"

"Only in public, for a few weeks," Gordon told her. "Soon I shall leave Throon again for a little while. And I promise you that when I come back it will all be the same between us as before."

AND that was truth, Gordon fervently hoped! For if he could get to

Earth and effect the re-exchange of bodies, it would be the *real* Zarth Arn who would come back to Throon.

Murn seemed relieved in mind but still a little rueful, as she threw on a black silk cloak and prepared to leave.

She raised herself on tiptoe to press warm lips lovingly to his. "Good night, Zarth."

He returned the kiss, not with passion but with a queer tenderness. He could understand how Zarth Arn had fallen in love with this exquisite, child-like girl.

Murn's eyes became a little wider, faintly puzzled, as she looked up at him after that kiss.

"You are somehow different, Zarth," she murmured. "I don't know how—"

The subtle instinct of a woman in love had given her vague warning of the incredible change in him, Gordon knew. He drew a long breath of relief when she had gone.

Gordon stretched himself on the bed in the little sleeping-room, but found his muscles still tense as steel cords. Not until he had lain many minutes staring at the glowing moonlight that streamed into the dark room, did his nerves relax a little.

One paramount necessity cried aloud in Gordon's mind. He had to get out of this crazy imposture at the earliest possible moment! He couldn't much longer carry on his weird impersonation of one of the focal figures in the approaching crisis of the great star-kingdoms. Yet how? How was he to get back to Earth to re-exchange bodies with Zarth Arn?

Gordon awoke next morning to glimmering white dawn and found the blue Vegan servant standing beside his bed.

"The princess Lianna asks you to breakfast with her, highness," the servant informed.

Gordon felt quick surprise and worry.

Why had Lianna sent this invitation? Could she suspect something? No, impossible. And yet—

He bathed in a little glass room where, he found by pushing buttons at hazard, he could cause soapy, salty or perfumed waters of any temperature to swirl up neck-high around him.

The Vegan had a silken white suit and cloak ready for him. He dressed quickly, and then went through the palace to Lianna's apartments.

These were suites of fairylike pastel-walled rooms beyond which one of the broad, flower-hung terraces looked out over Throon. Boyish in blue slacks and jacket, Lianna greeted him on the terrace.

"I have had breakfast laid here," she told him. "You are just in time to hear the sunrise music."

Gordon was astonished to detect a faint shyness in Lianna's gaze as she served him iced, red-pulped fruits and winy purple beverage. She did not now seem the regally proud princess of the night before.

And what was the sunrise music? He supposed that was another of the things he should know but didn't.

"Listen, it is beginning now!" Lianna said suddenly.

High around the city Throon loomed the crystal peaks of the Glass Mountains, lofty in the sunrise. Down from those glorious distant peaks now shivered pure, thrillingly sweet notes of sound.

Storm of music broke louder and louder from the glittering peaks! Wild, angelic arpeggios of crystalline notes rang out like all the bells of heaven. Tempests of tiny tinklings like Pizzicati of fairy strings was background to the ringing chords.

GORDON realized now that he was hearing the sounds given forth by

the sudden expansion of the glassy peaks as Canopus' rays warmed them. He heard the crystal music reach its ringing crescendo as the big white sun rose higher. Then it died away in a long, quivering note.

Gordon exhaled a long breath. "That was the most wonderful thing I've ever heard."

Lianna looked at him, surprised. "But you've heard it many times before."

He realized he had made another slip. They had walked to the rail of the terrace, and Lianna was looking up at him intently.

She suddenly asked a question that startled him. "Why did you send Murn away last night?"

"How did you know about that?" he exclaimed.

Lianna laughed softly. "You should know there are no secrets in this palace. I've no doubt it is buzzing right now with the news that we breakfasted together."

Was that so? Gordon thought in dismay. In that case, he might have some explaining to do to Murn when next they met.

"Did you and she quarrel?" Lianna persisted. Then she flushed slightly and added, "Of course, it's really none of my affair."

"Lianna, it is your affair," Gordon said impulsively. "I only wish—"

He stopped. He could not go on, to say that he only wished he could tell her the truth.

He did wish that with all his heart and soul, at this moment. Murn was adorable, but it was Lianna whom he would never forget.

Lianna looked up at him with puzzled gray eyes. "I don't understand you as well as I thought I did, Zarth."

She was silent for a moment, and then suddenly spoke a little breathlessly.

"Zarth, I can't fence with people. I have to speak straight out. Tell me—did you really mean it when you kissed me last night?"

Gordon's heart jumped, and the answer sprang from his lips. "Lianna, I did!"

Her gray eyes looked up at him gravely, wondering. "It seemed strange yet I felt you did. Yet I still can hardly believe—"

She suddenly, with the imperiousness that betrayed regal training, put her hands on his shoulders. It was open invitation to kiss her again.

Not if the whole palace had crumbled about them could Gordon have resisted doing so. And again, the feel of her slim, electrically alive figure in his arms, the touch of sweet, breathless lips, shook him.

"Zarth, you've changed!" Lianna whispered, wonderingly, unconsciously repeating Murn. "I almost believe that you love me—"

"Lianna, I do!" burst from Gordon. "I have, from the first moment I saw you!"

Her eyes softened, clung brilliantly to his. "Then you want our marriage to be a real one? You would divorce Murn?"

Gordon came to himself with a crashing shock. Good God, what was he doing?

He couldn't compromise the real Zarth, who loved Murn with all his heart.

CHAPTER VIII

The Spy from the Cloud

GORDON was temporarily delivered from his impasse of bewilderment by a providential interruption. It came from a chamberlain who hesitantly emerged onto the terrace.

"Highness, your father requests you and the Princess Lianna to come to the tower-suite," he told Gordon, bowing.

Gordon seized upon the chance to evade further discussion. He said awkwardly, "We had better go at once, Lianna. It may be important."

Lianna remained looking at him with steady gaze, as though expecting him to say more. But he didn't.

He *couldn't!* He couldn't tell her that he loved her, only to have the real Zarth Arn come back and deny it!

She was silent as they followed the chamberlain by gliding ramps up to the highest tower of the palace. Here were rooms whose glass walls looked out over all the shimmering towers of Throon and the stupendous encircling panorama of glassy peaks and sea.

Arn Abbas was restlessly pacing the room, a giant, dominating figure. The thin-faced Chief Councillor, Orth Bodmer, was speaking to him, and Jhal Arn was also present.

"Zarth, this matter concerns you and Lianna both," Arn Abbas greeted them.

He explained curtly. "The crisis between us and the League is deepening. Shorr Kan has called all League star-ships home to the Cloud. And now I'm afraid the Hercules Barons are wavering toward him."

Gordon quickly recalled the lukewarm attitude of Zu Rizal and the other Hercules Baron the night before.

Arn Abbas' massive face was dark. "I sounded Zu Rizal last night after the Feast. He said the Barons couldn't commit themselves to full alliance with the Empire. They're worried by persistent rumors to the effect that Shorr Kan has some powerful new weapon.

"I believe, though, that Zu Rizal doesn't represent the feelings of all the Barons. They may be doubtful but they don't want to see the Cloud conquer. I think they can be brought into

full alliance with the Empire. And I'm going to send you to accomplish that, Zarth."

"Send *me*?" Gordon exclaimed, startled. "But I couldn't carry out a mission like that!"

"Who could carry it out better, highness?" Orth Bodmer said earnestly to him. "As the emperor's own son, your prestige would make you a potent ambassador."

"We're not going to argue about it—you're going whether you like it or not!" snapped Arn Abbas.

Gordon was swept off his feet. He to act as ambassador to the great star-lords of Hercules Cluster? How could he?

Then he saw a chance in this. Once in space on that mission, he might manage to touch at Earth and would then be able to re-exchange bodies with the real Zarth Arn! If he could do that—

"This means," Arn Abbas was saying, "that your marriage to Lianna must take place sooner than we planned. You must leave for Hercules in a week. I shall announce that your marriage to Lianna will be solemnized five days from now."

Gordon felt as though he had suddenly stepped through a trapdoor into an abyss.

He had assumed that this marriage lay so far in the future he didn't need to worry about it. Now his assumption was wrecked!

He desperately voiced protest. "But is it necessary for us to hold the marriage before I go to Hercules as an ambassador?"

"Of course it is!" declared Arn Abbas. "It's vital to hold the western star-kingdoms to us. And as husband of the princess of Fomalhaut Kingdom, you'll carry more weight with the Barons."

LIANNA looked at Gordon with that curiously steady gaze and said, "Perhaps Prince Zarth has some objection?"

"Objection? What the devil objection could he have?" demanded Arn Abbas.

Gordon realized that open resistance would do him no good. He had to stall for time, as he had been doing since he was first flung into this involuntary impersonation.

He'd surely find a way somehow to dodge this nightmare complication. But he'd have to have time to think.

He said lamely, "Of course it's all right with me if Lianna approves."

"Then it's settled," said Arn Abbas. "It's short notice but the star-kings can get here in time for the ceremony. Bodmer and I will frame the announcement now."

That was a dismissal, and they left the room. Gordon was glad that Jhal Arn came with them, for the last thing he wanted at this moment was to face Lianna's clear, questioning eyes.

The next few days seemed utterly unreal to Gordon. All the palace, all the city Throon, hummed with activity of preparations. Hosts of servants were busy, and each day swift star-ships arrived with guests from the more distant parts of the Empire and the allied kingdoms.

Gordon was at least relieved that he hardly saw Lianna in this hectic time except at the magnificent feasts that celebrated the coming event. Nor had he seen Murn, except at a distance. But time was running out and he had not found any way out of this fantastic impasse.

He couldn't tell them the truth about himself. That would break his solemn promise to Zarth Arn. But then what was he to do? He racked his brain, but on the eve of the appointed day he still

had found no solution.

That night in the Hall of Stars was held the great reception for the royal and noble guests who had come from far across the galaxy for the wedding. The scene was one of staggering splendor.

Gordon and Lianna stood on the raised reception-dais, with Arn Abbas' giant figure on one side of them and Jhal Arn and his beautiful wife Zora on the other. Behind them were Commander Corbulo and Orth Bodmer and the other highest officials of the Empire.

The brilliant throng whom chamberlains announced as they streamed toward the dais, the majestic magnificence of the Hall of Stars, the televisior screens through which he knew half the galaxy was watching—all this numbed John Gordon.

He felt more and more like a man in a strange and impossible dream. Surely he would wake up at any moment and find himself back in his own 20th Century world?

"The King of the Cygnus Suns!" rang the chamberlain's measured announcements. "The King of Lyra!"

They streamed before Gordon in a blurred succession of faces and voices. He recognized but few of them—the cold-eyed Zu Rizal of the Hercules Barons, young Sath Shamar of Polaris, one or two others.

"The King-Regent of Cassiopeia! The Counts of the Marches of Outer Space!"

Lesser luminaries and officials of the Empire continued the procession to the dais. Among these last came a bronzed naval captain who offered Gordon a thought-spool as he bowed.

"A small petition from my squadron to your highness on this happy occasion," the officer murmured. "We hope that you will listen to it."

Gordon nodded. "I will, captain—"

HE WAS suddenly interrupted by Commander Corbulo. The grizzled naval chief had been staring at the bronzed officer's insignia and he suddenly pushed forward.

"No officer of that squadron should be nearer here than Vega right now!" snapped Corbulo. "What is your name and division-number?"

The bronzed captain looked suddenly gray and haggard. He recoiled, his hand darting into his jacket.

"That man's a spy, perhaps an assassin!" yelled Corbulo. "Blast him!"

The detected spy already had a short, stubby atom-pistol flashing in his hand.

Gordon swept Lianna swiftly behind him. He whirled back then toward the other.

But, at Corbulo's shouted command, from secret apertures high in the walls of the Hall of Stars had flicked down swift atom-pellets that tore into the spy's body and instantly exploded. The man fell to the floor, a torn, blackened corpse.

Screams rent the air, as the crowd recoiled in sudden panic. Gordon was as stunned as everyone else in the Hall by what had happened.

But Arn Abbas' rumbling roar rose quickly to dominate the scene. "There is nothing to fear! The man is dead, thanks to Corbulo's vigilance and our guards inside the walls!"

The big ruler shot orders. "Take the body into another room. Zarth, you and Jhal come along. Corbulo, have that thought-spool ray-searched, it may be dangerous. Lianna, will you reassure our guests?"

Gordon went with the giant emperor into another, smaller room where the blasted body of the spy was quickly carried.

Jhal Arn bent over the body, ripped away the scorched jacket. The mangled torso was not bronze in color like

the face. It was a curiously pallid white.

"A Cloud-man! A League spy, as I thought!" snapped Arn Abbas. "One of Shorr Kan's agents in clever disguise!"

Jhal Arn looked puzzled. "Why did he come here? He wasn't primarily trying to assassinate any of us—he didn't draw his weapon until he was detected."

"The thought-spool he was trying to give Zarth may tell us something," muttered the ruler. "Here's Corbulo."

Commander Corbulo had the thought-spool in his hand. "It's been thoroughly ray-examined and is a simple thought-spool and nothing more," he reported.

"It's cursed strange!" rumbled Arn Abbas, his face dark. "Here, put the spool in this reader and we'll listen to it."

The thought-spool was inserted in the reading-mechanism on the desk. Arn Abbas flicked the switch.

The spool started unwinding. Gordon felt the impact of its recorded, amplified thought-pulsations beating into his mind as into the minds of the others.

A clear, resonant voice seemed speaking in his mind as he listened.

"Shorr Kan to the Prince Zarth Arn: It is unfortunate that the arrangements we agreed on for bringing you to the Cloud were thwarted by the chance interference of an Empire patrol. It regrets this as much as you do. But rest assured that I will make new arrangements at once for getting you here in safety and secrecy."

"The terms upon which we agreed still stand. As soon as you join forces with me and impart to us the secret of the Disruptor, we of the Cloud will be able to attack the Empire without fear of defeat and you will be publicly recognized as my co-equal in ruling the

entire galaxy. Make no move that might arouse suspicion, but wait until my trusted agents are able to bring you safely to me."

CHAPTER IX

In the Palace Prison

TO GORDON, at first, that thought-message did not make sense. A message from Shorr Kan to him, to Zarth Arn?

Then as the significance of it sank in, he felt a shock of bewilderment and dismay. And his dismay deepened as he encountered the raging eyes of Arn Abbas.

"By Heaven, my own son a traitor to the Empire!" cried the ruler. "My own son intriguing secretly to betray us to the Cloud!"

Gordon found his voice. "This message is a lie! I never made any arrangements with Shorr Kan, nor had any discussions with him!"

"Then why would he send you such a secret message as this?" roared the emperor.

Gordon caught desperately at the only explanation that suggested itself to him.

"Shorr Kan must have sent this message hoping it would be discovered and make trouble! There can be no other reason."

Jhal Arn, whose handsome face was deeply troubled, spoke quickly.

"Father, that sounds possible enough. It's impossible to believe that Zarth could be a traitor."

"Bah, it's too thin!" raged Arn Abbas. "Shorr Kan is too clever to devise such a harebrained plan that would gain him so little. Why, his spy was only detected at all by the mere chance of Corbulo noticing his naval insignia."

His massive face darkened. "Zarth, if you have been secretly plotting with the Cloud, the fact that you're my son won't save you!"

"I swear I haven't!" Gordon cried. "I didn't arrange with those League raiders to come to Earth for me. And why in the

(Continued on page 93)



The chattering monkeys fled from roaring cylinder overhead

The Uninvited Jest

by **ROG PHILLIPS**

LET'S see now," Ray Bradley said slowly. "This stuff gives me a headache, but I want to understand it if it IS understandable. The correct translation reads this way: two things cannot influence one another unless they both exist now. If two things do not have the same now they are mu-

tually non-existent although they both exist. Time does not have real existence as an everywhere dense continuum but is an empirical continuum through which the now, which is of no temporal extent whatever, seems to be traveling uniformly. There may be other nows in the empirical continuum



**Is Time an endless stream? Or is it an
endless series of cycles? The spore-spewing
rocket above the primeval jungle—answered!**

which have real existence, but if so, they are completely independent of the now of this reality."

He frowned in exasperation. "I don't get it. If this race hadn't had such a highly developed civilization, and if this book didn't have all the earmarks of a standard text of great importance,

I would say that the author of it was screwy."

"It sounds to me like a build-up for a theory of time travel," Jack Dorsey said. "What else does it say?"

"This reality does not exist in time, but moves through time. If any other reality has real existence, it has it in a

different now than our now, and its now would be independent of ours." Ray Bradley read from the typewritten translation. "Since it must be independent it follows that it could not possibly move through time at the same rate except by coincidence. Hence, inevitably, at some instant in the past or the future of our reality the nows of the two realities must coincide, but for no length of time whatever. At the intersection of the two nows there could be no detectable effect. This follows from the fact that there can be no motion whatever now, but only the appearance of motion by a comparison of details in two instants widely separated in the empirical time continuum."

"Mm, mm," Jack exclaimed. "This gets worse and worse. Go on."

"Either the rate of time travel of now is unalterable, or it is possible to speed it up or slow it down. If some section of our reality could be made to change its now, even by an inconceivably small margin, it would at once be non-existent to the rest of reality. However, if such a thing could happen, the section thus transported would almost instantly dissipate unless the now into which it jumped had a physical universe in space. In that case it would become a part of that reality unless its rate of travel in time were different." Ray Bradley looked up from the typewritten sheet and grinned at Jack. "This next is what we have been looking for. It says: From the nature of reality it is impossible to change its rate of uniform motion through time, and hence our now is unalterable. However, it is not inconceivable that part of our reality exists in two separate nows and may hence be affected by the rest of the realities of both nows, acting as intermediary for the interdependence of both realities, existing with both which are mutually non-existent!"

"I don't think I was cut out for this sort of work," complained Jack. "How could we be looking for that when we don't even know what it means? My personal opinion is that the experts have the translation wrong."

"No, the translation is perfectly correct. There's no question about that," Ray replied. "This civilization developed for thousands of years beyond our present level. How do you think Euclid would have felt turned loose in a modern science library?"

"I guess you're right," Jack shook his head dolefully and sighed in discouragement. "We'll just have to wade through it."

After a short pause Ray continued reading. "If such interrelation of nows has real existence it may be possible to use this as a springboard to jump our now ahead for some section of space, and jump it back again at will. If so, we will not be traveling into our own future or past, since they don't have real existence, but into distinct and independent universes, existing in a common space, traveling in a common time continuum, but existing in different nows."

"Zshat callsh fer a drink," Jack muttered, rising and staggering weakly toward the door.

RAY laughed, dropped the typewritten sheets on the office desk and followed him, catching up and pretending to help his companion to the door.

They stepped into the corridor and followed its right-angled turns until they reached the mess compartment. There they joined a group of a dozen or so men and women who had had the same idea, only sooner.

The shields and filter screens were swung back from the outer walls of the compartment, exposing to view the sweeping, monotonous landscape of

Mars. A few degrees above the horizon the sun, considerably smaller than on Earth, hung in a deeply blue sky.

The ground outside the ship was a perfectly flat expanse of incredibly fine sand, of which the whole surface of Mars seemed to be composed. Starting about ten miles away to the left of the view was one of the low sand walls which stretched across the landscape to drop over the horizon to the right in a great circle line.

These giant sand walls, as much as a mile wide, and no more than thirty feet high crept over the surface at infinitely slow speeds, moved along by the ever constant winds which picked up a little sand on the windward front and dropped it again to the leeward. A cupful a day for every foot of length; and in a hundred years the sand wall has moved a foot across the planet.

When the first space ship had landed on Mars in 1956 and then brought back the news that the supposed canals were only slightly-raised sand dunes, made regular by the perfect constancy of the tide winds, the news had shattered all hopes of there being any traces of civilization on the planet.

Then, one fall day in 1961 the world had been electrified by the announcement that traces of a city had been found on Mars. Julian Varny, the discoverer, had brought back a stainless steel vase of queer design, and several photographs of structural regularities protruding slightly above the smooth floor of the planet.

Other explorers, seeing a chance for immortality in the history of space travel, had combed the surface while a giant laboratory ship was being constructed to carry trained personnel and fabulous amounts of equipment to the site of the ancient city of who knows what kind of creatures that lived in the dim past of the planet.

No other traces had been found, however, and now, two years after it had been discovered, the ancient civilization was being dissected carefully. The entire resources of the Earth were behind this project; and why not? In all the universe there seemed to be no intelligent creature except man. But here was unmistakable evidence that long ago there HAD been thinking creatures.

In six months of earth time the three thousand experts had uncovered thousands of relics. Then they had discovered the time capsule. A stainless steel sphere fifty feet in diameter, it was mirror smooth, with no signs of an opening anywhere. Finally they had commenced drilling into it and chipping out an opening. It took almost a week to get through the two-foot thick wall of solid stainless steel.

Inside was stored the record of the science, history and knowledge of this mysterious, extinct race of creatures. An estimated two hundred thousand books whose pages were of stainless steel with the characters lightly engraved on the surface. A light coating of black ink paste, rubbed over the surface and then wiped off, brought out the characters so that they could be photostated. As soon as a book was photostated it was cleaned and returned to its proper place in the collection. The photostats alone were handled to any great extent.

DECIPHERING of the strange writing had been easy and made correct beyond dispute because of the series of introductory volumes the ancient race had left which gave unmistakable pictorial meanings to the various words. It had immediately become obvious that the stainless steel globe was in reality a time capsule, just as had been suspected, designed to pre-

serve all the knowledge of this race for millions and billions of years until someone came along with the ability to carve an opening into the two-foot thick stainless steel wall.

But what knowledge! Most of it seemed beyond understanding. There was a discussion on it going on in the mess compartment. Lahoma Powell, the brilliant and noted psychologist, was talking.

"The book I'm translating is beyond me," she was saying. "It starts out by saying that all life must be essentially complexes based on individual molecules of cyclic structure with either physical breaking points or zero potential terminals. Then it goes into detailed structure and chemical reaction. I'm not going to translate the book. I'm just going to translate the written part and give the key to the translation of the chemical details that form the biggest part of the book."

"Hah!" exclaimed Ray Bradley who had just entered with his partner, Jack Dorsey. "That stuff is elementary compared to what we have been translating. Did you know that there is no such thing as time?"

Pleased at the looks of incredulity this remark invoked, he went on. "Well, believe it or not, there is no such thing as time. If there were, the past and the future would exist just as solid as the present. Only these creatures called it the 'now' instead of the present. They seemed to make some sort of a distinction between the present and the now, too. They say that the present lags behind the now and is as fictitious as time. The now seems to be moving IN time without forming any part OF time."

He frowned in puzzlement. "You know, there seems to be a meaning there I can almost get. The universe of reality exists NOW, and will always

exist NOW. It didn't exist yesterday. No. That isn't right. What I mean is that it DOESN'T exist yesterday. No. That isn't what I mean either."

Everyone laughed. Ray's frown erased itself as he smiled at his own bewilderment. "Anyway," he concluded, "I think they've got something there. They seem to make a distinction between two kinds of existence. The universe in the now has real existence. But time, which the now moves through without forming any part of, has what they call empirical existence. They call time an empirical continuum and space a real continuum. They say that two material universes can exist in the same space so long as their nows are separate. Then they say that some part of our own universe might conceivably exist in more than one now. That is really beyond me!"

"I think I know what they meant," Lahoma said, a mischievous twinkle in her eyes.

"What?" encouraged Ray.

"It's really quite simple. If another real universe exists in our space in a different now," Lahoma spread her hands in a gesture that implied "Quite simple, by dear Watson," "it doesn't exist now, and in all our past and in all our future that will hold true. We can always say that it doesn't exist now. And if there are people in that other universe with a different now, they can always say the same, because we DON'T exist in their now."

"I can disprove that," Jerry Myers, the famous geologist, spoke up. "Suppose their now is twenty-four hours behind ours. Then their now is where ours was yesterday. That right?" At Ray's nod he went on. "Then that universe would be ours as it was yesterday, and they would be us."

"That isn't right," Ray objected. "They explicitly state that our uni-

verse as it was yesterday does not have real existence and that our universe only exists now."

"YOU mean time travel is impossible?" Jerry asked. Then without waiting for an answer, "Well, it is generally considered to be impossible anyway. If we could travel into the past we could murder our own grandparents before they got married and had any children." He chuckled.

"That's the funny part of it," Ray said. "These creatures say that time travel might be possible, but that if it is you don't land in your own universe at some other time in the past or future, but in a different universe altogether, which exists in our space, but in a different now."

"A sort of fourth dimension?"

"No, that's the funny part of it," Ray answered. "They are quite explicit about there being no fourth dimension. They say that if we could change our now we would still be in the same space of three dimensions. If that now had a universe we would be sitting pretty; but if it had no universe in the now we landed in we would disperse."

"It sounds like they were trying to get around having a fourth dimension to me," spoke up Sigmund Atlee, the chief engineer in charge of excavation. "What I mean is, if we take the now of our universe as a three dimensional 'plane' in four dimensional space, we satisfy all the details of their theory in a more natural way. Then we can admit all they say, and our universe is simply moving uniformly in the fourth dimension. We can then admit that it exists only in the now, and that other universes can exist in other nows, because the now of existence is merely its fourth dimensional space co-ordinate."

Ray grinned cheerfully. "I can't argue with you. We are here, not to prove these creatures were wrong and we are right, but just to find out what they knew and believed. So far as we have gone it seems they did not believe in a fourth dimension of any kind."

Sigmund smiled back. "*Touche*," he said.

The intercom came to life at that moment and said, "All technicians and department heads are called for an immediate general assembly. An important discovery has been made. All technicians and department heads. General assembly now."

The mess compartment emptied with a murmur of excitedly curious voices drifting back.

Lawrence Manning, the architecture historian, stood on the slightly raised platform of the assembly hall. As soon as the three hundred odd experts had all seated themselves he began talking.

"We came across the plans to the city, finally," he said. "It seems that this city is in a valley about twelve hundred feet deep. Of course the sand has filled it in, and if some of the buildings had not been about fourteen hundred feet high we would never have discovered it. The exact location of the time sphere is shown, and from that and the many things we have already determined about this area, we can tell pretty much what is underneath us, and where.

"There is something that seems to be of even greater importance than the time sphere itself. A sort of vault. It's two miles directly south of the time sphere and eight hundred feet lower. It was originally built into the bedrock of the hillside in that area.

"This vault has walls twenty feet thick. It seems to have been designed so that nothing could break into it.

But," and he chuckled, "it has vault doors on it. Two of them, each ten feet thick. Each door has a combination lock on it. The locks are under the surface of each door, and the combination to each is in a code. We are warned that we cannot grope for the locks, but must locate them before we touch the surface of each door, or the lock mechanism won't function. And we must solve the code combinations the first time, because if we make a mistake the combination changes. We are told that if this happens we can only determine three possible answers to the second combination, and have to guess which is right. The second mistake nets us one chance out of nine on the third try. And if we fail then we can start all over again in a thousand Martian years when the combination returns to the original settings.

"Obviously this was done so that no inferior mind could get in. That implies that what is inside is of more importance even than what is in the time sphere. I can't imagine what it would be, myself, unless it is some of the Martians themselves in suspended animation! They don't leave any hints, though, so your guess is as good as mine. A thorough study of the detailed maps of the city shows no other sites of special importance than these two; the sphere, and the vault."

SIGMUND ATLEE stood on the small platform of the heavy derrick from which was suspended the driller, a huge affair that sank slowly into the ground and formed a four foot tube straight down. The three inch thick cable that would eventually pull it back to the surface swayed slightly as it hung a couple of feet in front of him.

Every fifteen minutes the machine far below would jerk and growl with a deep throated roar as it bored

through another floor level. In the hundreds of centuries since the building had been left to the whims of nature the almost atomic sand particles had completely filled every cubic inch of space all the way down.

The driller, by the tremendous power of its weight and ultra-high frequency vibrations, forced this sand to the sides and as it sank lower and lower left a smooth, circular wall of fine, but very strong cement, three inches thick, made of the sand itself and a plastic solvent material that hardened into a ceramic material as strong as steel.

The driller reached the level of the vault and was pulled up, swung to one side, and a platform with several workmen dropped down the bore.

Twenty-two hours after work had begun, the four foot shaft was completed and the big door of the vault made accessible! Now would come the ticklish work.

Ray Bradley and Jack Dorsey stood on the sandy floor in front of the vault. The door was a mirror-smooth expanse of stainless steel, four feet wide and eight feet high, without a trace of a knob.

"Got any ideas?" asked Ray.

"Lots of them," Jack answered, "but none of them would work. We can't use an electrical probe. X-ray wouldn't do any good, since we can't get on the other side until after we find the knob. I doubt if any kind of a sound probe, measuring echoes in the metal, would work."

The platform came to rest behind them and Lahoma and Mr. Atlee stepped off.

"Haven't you got it open yet?" Lahoma exclaimed in mock surprise.

Ray sneered at her and said, "Don't be funny. This is serious."

Lahoma gave him as much of a leer

as her habitually pleasant face could muster and replied, "It *will* be serious if you don't get it open—for you."

"Don't I know it!" murmured Ray, turning back to the blank expanse. His face lit up with a sudden light. "I've GOT it," he said, snapping his fingers.

Without waiting for comment he went on. "If the knob is near the surface it is covered with a sheet that can't be over a few inches thick. If we heat the surface it will cause the knob cover to bulge just enough to be detectable!"

"Wait a minute," interrupted Mr. Atlee. "The cover is probably welded in. Why not polish the surface even smoother and let acid etch out the weld metal?"

"That has been tried on samples of structural joints of this metal," Jack answered him. "This metal is thousands of years old and the crystalline structure has become perfectly uniform so that weld metal is undetectable. I think Ray's found the only method."

The lift went up with a note to send down a torch. While it was gone Ray started the conversation that had been broken off by the assembly call.

"I was going to bring up a point about the assumption that our now is uniform all over the universe," he said. "Suppose it isn't? Suppose, for example, that the now of Arcturus is fifty years behind ours here. Then we would be seeing the light that leaves Arcturus now. Get what I mean?" he asked hopefully.

Lahoma laughed. "The way you said that last I think you hope we can explain to you what you mean."

"I know what I mean," Ray answered her in an injured tone. "I meant that if we could accelerate to the velocity of light and travel to some star, our clock would stand still until we decelerated again, so that even if it

took a thousand years of time here on Mars or Earth, it would take no time at all to make the trip, so far as we were concerned."

"YOU'RE all wet, Ray," Jack broke in. "You're trying to say that now is a variable. Or anyway curved, with a functional link to the velocity of light. If that were so, you could send a beam of light in any direction and have it reflect back to its source, and be in a different now, so that at its source it wouldn't exist now. But it does exist now, somewhere between the source and the reflector. It never gets out of our now."

"I guess you're right," Ray admitted, "but the old boys here had something in their now business that I am going to get if it's the last thing I do. Maybe they jumped into another now and that is why they left the sphere and the vault. Certainly a race as advanced as this one was wouldn't have let a little thing like lack of water end their career. This vault was definitely made expressly for discovery in the distant future by an intelligent race, when they knew they wouldn't be around."

"Well, listen to this idea," Lahoma put in. "No matter how much you change the velocity of something in space, you can't change the velocity of its now through time. Everything in our now is moving at a uniform velocity through time. It would take a collision of two things traveling at different rate in time—in other words, with different nows that intersected when their space coordinates also intersected, to change the velocity of any part of our universe so that it would not be in our universe now, from now on."

"You made a grave mistake there," Sigmund Atlee said, with a twinkle in his eye. "Not in your logic, but in your psychology. And you a special-

ist in psychology."

"I get what you mean," Lahoma said, an answering gleam in her own eye.

The lift came to a stop. There was a two wheeled cart on it with gas tanks, and a workman. He wheeled the cart over to the four, and listened while he was told what was wanted of him.

Three hours later Ray Bradley, Jack Dorsey, and the perspiring burner had to admit defeat. Not a bulge had developed. Lahoma and Sigmund had long since gone back to the surface. Now they, too, climbed onto the lift in discouragement, and were lifted up. On the way up Jack said to Ray and the workman, "You know, I had a vague suspicion that it wouldn't be so easy. They would have made it so it takes something really brainy to find that knob. And if I know my stainless steel, especially this one we are dealing with now, the surface of that door will be as hard as diamond by morning."

THREE weeks passed with no success. The newspapers back on earth carried a complete description of the problem, and the daily attempts that always failed.

One day a Chicago paper received a letter from a high school student offering a suggestion. "Why don't they," the letter suggested, "apply heat at one spot and measure its dispersal over the surface? The temperature pattern won't be uniform in the area over the knob."

When Ray and Jack received the suggestion Ray slapped his forehead in mock despair. "Now even high school kids are smarter than I am!" The suggestion worked, and after two hours of careful work the knob was located.

A small hole was drilled to the empty space where the dial chamber was, and a pea-size cold light capsule shoved in,

followed by a slim periscope. This revealed the dimensions of the chamber and the appearance of the knob. With this data it was merely routine to cut away the covering.

A picture of the combination dial was taken for study, but of what use the picture would be no one would suggest, for the dial was perfectly blank.

"What do we have to go on?" asked Ray of the men who had been assigned to study of the problem.

"Thirteen seventh power equations in one variable and the statement that if we get it wrong the first time we have one chance in three of opening it the second try, and if we fail then we have one chance in nine of opening it the third try. If we fail then we have no more chances in our lifetime."

"What conclusions have you drawn?" Ray asked.

"Well," the man answered, "the first try, plus three possibilities on the second try, plus nine on the third, gives thirteen combinations. There are thirteen seventh power equations. Each of these has seven solutions. The seven roots to the first equation are probably the numbers of the combination."

"Only there are no gradations on the dial," Ray finished for him.

"That's right," the man agreed.

"Well," Ray went on, "obviously the seven roots give the settings for the combination. Not the order of the settings. And we don't know whether the numbers refer to radians or some special system of gradation analogous to our degrees. Wait a minute. How do you know they are power equations?"

"We had to deduce that. They wrote their exponents as subscripts."

"Hmm," Ray said. "Suppose they really are subscripts. Then we have thirteen simultaneous equations in seven unknowns. Then any seven of them would give seven knowns. But we

would have a lot more than thirteen sets of equations. Maybe you're right, but we must make sure."

Two weeks of careful study of the mathematics books left by the ancient race disclosed that they had three systems of dividing the circle. But each system of measurement used a different symbol, and the symbol used in the power equations was the same as the one which meant one twenty-fourth of a circle.

Meanwhile a device had been built which could be screwed onto the face of the vault door and attached to the knob, which could turn it any measured number of degrees in either direction.

It was a very nervous group that watched Jack Dorsey turn the combination dial according to the system they had finally settled on. When the last setting was reached the door slowly moved outward about a foot, revealing recessed hooks around the sides.

It took a whole day to excavate room enough to pull the ten foot thick block of solid metal out of the way.

The inner door of the vault was covered with the fine engraving the ancients had used to insure the preservation of their writing. This was rapidly photographed and printed.

"What do you make of it?" Ray asked Lahoma some time later.

"I don't know," Lahoma replied. "Somehow, the vault seems to be the only illogical thing about the whole ruins. Why should they build such a huge vault, and install an atom-powered refrigeration system, just to preserve a few statues of stone? The temperature in there was far below freezing even yet, after—how long do they think it has been, Ray?"

"Seventy-five thousand years," he replied. "I wonder about that. Nothing could possibly have gotten out of

there. Not even an atom. And the vault doors were not designed to be opened from the inside, either. Jack has been working on a theory that they thought it might be millions of years before the vault was opened, and the statues would crumble from age before then unless kept cold. That won't hold water, I am thinking."

He was silent for several minutes, frowning in thought. "You know," he said suddenly, "if we put our conventional ideas into the problem, only one conclusion can be drawn. They kept it cold in the vault to preserve life. But what kind of life? We didn't find anything in there."

"Microbes," whispered Lahoma.

"Why microbes?" asked Jack. "They weren't microbes themselves. According to their statues they were men; human beings something like us, only shorter, and with brains about twice as heavy as ours."

"I don't know," Lahoma answered slowly. "But microbes are the only answer. Perhaps we'll never find out for sure. I doubt if a microbe could be revived after being frozen seventy-five thousand years. So maybe all there was were the statues and dust."

Part II (73,000 B.C. on Mars)

531 regarded 322 with expressionless face. His telepathic voice was cheery, though, as he regarded her mind. Spoken words would have been useless, even if his atrophied mouth had suddenly acquired the power to form words, because both were deaf,—hereditarily so.

Two hundred thousand years of nothing but telepathic exchange had atrophied the powers of speech and hearing until the power to utter sounds or hear them was gone. (The ability to consciously control the mouth was rare, and as amusing as the ability some peo-

ple of today have to wiggle their ears.)

"What is the state of your phase of the problem?" 531 asked.

"We have tried over two thousand variations of environment, so far, without success. Division still does not come properly. Perhaps it is impossible." 322's thoughts were gloomy.

"Without division there is an appreciable margin for failure," 531 mused. "Still, if that must be, we must make the most of it. Keep trying, though."

"What is the general state of the problem now," asked 322.

"Much the same. Our theoretical solution to the problem of reaching another now has not met with the least success in experiment. If we could just reach a fraction of an instant into the past or future, our gravitational field would not exist for us, and we would be in all probability in an interstellar space, as you know. Then leaving this planet would mean simply transfer to another now, a slight period of waiting until our natural velocity had carried us out into space, then reversion to our ordinary now. We could then go any place we wished to. It's too bad we have been unable to find any more fissionable lead. There are not enough sources of power left on the planet to get anything more than the weight of one person off. It seems that unless time travel is possible we are doomed to extinction. All we need is atomic power to save the race. Power to go out into space and find enough ice blocks to renew our dwindling water supply."

"Then my experimental department is the only hope?" 322 asked.

"It would seem so. The life forms on Earth are sufficiently well developed to make our alternative plan feasible. The idea of a vault here in the city would add to the odds in favor of the race not dying out. We could send a small rocket to the earth and leave the rest

in the vault."

"What has been tried on time travel?" asked 322.

"Nothing much could be tried," 531 answered. "We have observed physical phenomena in environments of both positive and negative twenty-million electrostatic volt potentials and found nothing that was not predicted from accountable facts. It would be only on unpredicted data that we could formulate a method of altering the rate of our now."

"Then we will have to send the rocket to earth and watch the results," 322 remarked.

"Yes," 531 said. "We have perhaps three hundred years left in which to observe the results. We can't be sure in that time. So, regardless, we will leave the vault and the sphere. But it would be satisfying to know that we have descendants on earth."

Three Martian years later a long, slim rocket whished into the void and sped Earthward. Automatic mechanism set off rocket blasts that gave it a steady orbit in the earth's upper stratosphere. It circled the planet several times, and then screamed downward to bury itself in the mud of a tropical marsh.

THE Martians, watching through their telescopes, seemed more concerned about the success of the rocket's flight around the Earth than about the success of its landing. Their giant telescopes, held squarely on the desired image by light-sensitive cells that kept the broad outlines of the image steady and the eyepiece, in spite of the rapid shifts caused by variation in refraction of the various layers of gas in their own planet and on Earth, told them of the rocket's end.

The Martians watched the rocket

disappear in the black ooze, and saw the few bubbles that pushed to the surface; then ceased to be interested.

"If we postulate that the fundamental units of reality are in four dimensional space," Jack Dorsey argued, "then we can say that their now is their velocity in the fourth dimension, while they are only three dimensional in shape."

"Nonsense," Lahoma exclaimed. "You have to have the fourth dimension be distinct from the other three that way. And you have to have space, with no structure at all, be ruled by cartesian co-ordinates, like analytic geometry. That's too artificial."

She suddenly became pale and swayed dizzily. Brushing her forehead with the back of her hand she sat down on the sand.

"What's the matter?" asked Jack and Ray at the same time.

"I don't know," answered Lahoma.

"I'll go get the doctor," Jack mumbled, and ran toward the space ship.

Dr. Downing and two men with a stretcher came back with him. The doctor closely examined Lahoma. His only comment was, "Hmm." Then he gave a piercing, almost accusing look and ordered her placed on the stretcher.

That was the beginning. Before the day was over fifty women were in the ship's hospital. Rumor grew fast and furious. A disease had been in the vault. A disease that affected only women. The doctor and his staff refused to comment.

All leaves to Earth were cancelled until further notice, and a quarantine was placed on the whole area. Supply ships dropped their loads without landing. Communications with Earth were censored.

But after two months no deaths had resulted. The doctors were still un-

communicative, but they seemed sure of themselves, and quite optimistic.

"Have you found a cure yet?" Ray asked Dr. Downing one day.

Dr. Downing gave him an amused smile and said vaguely, "We really aren't looking for a cure. We are more interested in observing the development of the,—er, ah,—disease."

"Well," Ray persisted, "could we visit the girls. I'm sure Lahoma would like to have Jack and me visit her."

"I'm sure she would," the doctor chuckled, "but we can't allow that for some time yet."

Shortly after this a supply ship landed under robot control, carrying several cows, horses, goats, and even two female gorillas. These were, "To see whether the disease were communicative to animals as well as humans," to quote Dr. Downing's official statement.

Meanwhile the work of translating the thousands of volumes in the sphere progressed steadily. There was a complete volume on the theory of trans-temporal existence.

Ray and Jack spent two months on this one volume, only to discover in the concluding chapter that the author had merely been eliminating possibilities in the whole book. He had built up a beautiful and consistent theory only to prove that it didn't hold water. And yet it was acclaimed inside the cover as one of the greatest theoretical advances in the history of the race. Their last achievement.

"Logically," it wound up, "if we give a particle existence in two separate nows which are travelling through time with any finite separation in time, and give it any uniform velocity in space, then we see that in the other universe it is existing in a different place in that now than it is in our now. If we postulate an everywhere dense continuum of nows, so that the particle becomes,

in effect, a long string, any cross section of which is a sphere in a single now, we not only give time a real existence as an everywhere dense continuum, but also all the past and the future.

"If we do this we must account for the slicing of our now into a perfect three dimensional slice of four dimensional existence; the difference between one dimension and the other three, which are purely relative, thus introducing an absolute dimension into space; and finally we must postulate that motion is impossible of real substance, and only possible to space itself, moving uniformly along an absolute dimension. With all these artificialities we gain nothing concrete. Everything we obtain is repugnant to common sense and beyond proof.

"So by reduction to absurdity we have proved that no part of our universe can exist except now. There may be other nows, but they can have no functional connection with ours. And fundamentally, now is a property of the primal stuff of reality. Just as motion can only be known and not reduced to something simpler, so now is the metaphysically untouchable simplest abstraction from the concept of motion. Like space itself, it is everywhere the same. The now on Mars is exactly the same as the now billions of light years away. The measure of time and the perception of passage of time may vary, but the velocity of now in the empirical time continuum is unalterable."

CONCLUSION

531 finished the report on the impossibility of time travel. He sighed regretfully. He had wanted to visit the Earth and perhaps see Martian civilization transferred to that planet in his lifetime. Now there was only extinction for him and his companions.

There might not be extinction for his race, however. He looked over the latest photos of Earth. It had been fifty Martian years since the rocket had sprayed its cargo around the Earth and then sunk into the ooze. Already there were several hundred villages dotting the surface of that planet. And the vault had been completed and sealed up. All was finished.

322, who had been quietly listening to her companion's thinking, telepathed, "Perhaps it is just as well that we could not bring about division without loss of identity. We have seen our children on Earth born out of the wombs of cattle, carnivorous beasts, and the strange Earth monkeys that look so much like caricatures of us. It is just as well that normal reproduction now take over or the human race would be the scourge of the Earth."

"Yes," 531 replied. "We took our fertilized eggs and made them into spores able to survive various environments until they entered the bloodstream of warm-blooded animals. Then they reverted when touched by substances found only in the wombs of the females and started their growth. We sent billions of these to Earth. We have stored billions in the vault, where, if our first venture fails, some interstellar traveller may find them some day and unknowingly and unwittingly revive our race. We have put such difficulties in the way of opening the vault that only a race wise enough to immediately deduce what is going on will open it.

"If these spores could reproduce as spores, they would continually bring into being each generation on Earth. Normal reproduction would have no place in the scheme then, and human values would not exist. It's better that they don't multiply. True, the risk of extinction is greater this way, but a wiser Providence than we has decreed

that this risk exist. If our children on Earth survive and follow their normal communal instincts,—who knows? In fifty or a hundred thousand years they may attain to the heights of civilization which we gained before our planet died. And living on a younger world they may go even further.”

“I wonder,” 322 said dreamily, “if it

will be descendants of these children of ours on the Earth who will eventually open the vault?”

“It would be a good joke on them if they did,” 531 chuckled. 322 joined in, and their telepathic chuckles spread over the city as others heard and laughed at the thought.

THE END

★ THE INVENTOR OF THE CROOKES TUBE ★

By CARTER T. WAINWRIGHT

SIR WILLIAM CROOKES, English chemist and physicist, was born in London on June 17, 1832. He studied chemistry in that city at the Royal College of Chemistry and became an assistant under A. W. von Hofman. In 1854 he became assistant in the meteorological department of the Radcliff observatory, Oxford, and in the following year, the professor of chemistry at the Chester Training College. From the time of his marriage in 1856 to Ellen Humphrey he lived in London, devoting himself uninterruptedly to scientific work of various kinds. In 1859 he founded the *Chemical News*, and continued to be its editor during the remainder of his life. He was knighted in 1897 and received the Order of Merit in 1910. He was president at different times of many learned societies; from 1913-15 he was president of the Royal Society. He died in London on April 4, 1919.

Crookes was a brilliant investigator in many departments of theoretical and applied chemistry, and the discoverer of several important principles. He was an authority on sanitation and the disposal of sewage. He devised the method of attaining a high vacuum, which made the incandescent light bulb a possibility.

In 1861 spectroscopic observations on the residue from the manufacture of sulphuric acid led Crookes to the discovery and isolation of thallium, a specimen of which was shown in public for the first time at the exhibition of 1862. This metal when pure is of a silvery white color, and so soft that it can be scratched with a piece of pure lead. It can be extruded, but not drawn into the form of a wire, but has little tenacity or elasticity. It is slightly heavier than lead, melts at a lower temperature and tarnishes quickly in the air. Its compounds are extremely poisonous. In the Periodic System of the elements it is next to the bottom of the vertical group headed by boron, and which contains in the order given aluminum, scandium, gallium, yttrium, indium, lanthanum and erbium, and stands between mercury and lead in the eleventh of the horizontal series. During recent years, as a result of the discovery of radium and the series of disintegration products from it and the metal thorium, it has been thought by investi-

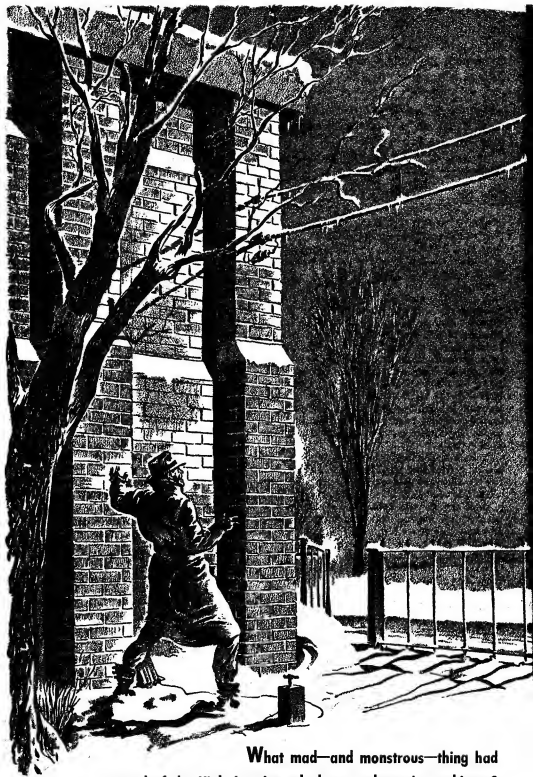
gators of those phenomena that it may prove to be the final disintegration step of thorium, as lead has proved to be of radium. When the flame produced by the combustion of thallium is examined in the spectroscope, a brilliant green line appears at one place, which is so characteristic that the presence of the metal in very minute quantities can be detected by the test. It occurs in nature in very few minerals, and almost always in combination with the non-metal selenium. In the course of investigations on the properties of thallium Crookes observed the curious behavior of the hot element while being weighed in vacuo. This led him to construct the radiometer.

HIS researches on the electrical discharge through a rarefied gas led to the observation of the dark space which bears his name, and Crookes developed his theory of “radiant matter” or matter in a “fourth state.”

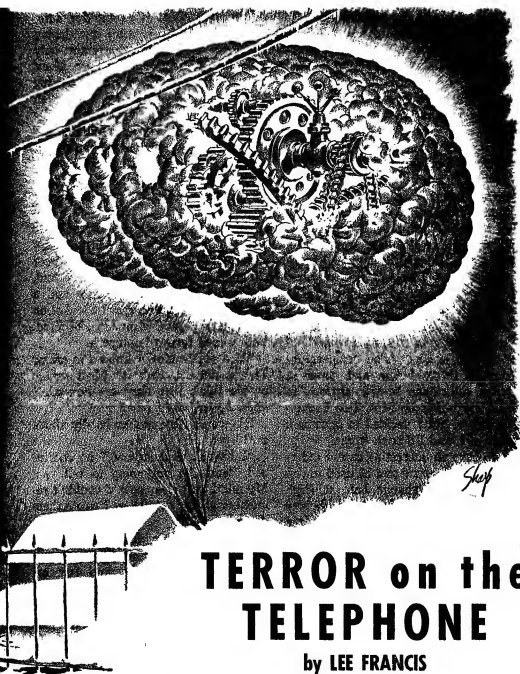
In 1883 Crookes began an enquiry into the nature and constitution of the Rare Earths, his observations on yttrium led him to the theory that all elements have been produced by evolution from one primordial stuff. He succeeded in artificially making minute diamonds; and on the discovery of radium he took up the study of its properties. He invented the spinthariscopes which shows the presence of traces of radium salt by the production of phosphorescence on a zinc sulphide screen. Crookes was constantly consulted by the Government on chemical questions, and one of his many practical contributions to the public welfare was his production of a glass which would effectively shield the eyes of the workers from the deleterious rays emitted from molten glass.

Crookes wrote or edited various books on chemistry and chemical technology, including *Select Methods of Chemical Analysis*, which went through a number of editions. He was a keen student of psychic phenomena and sought to effect some correlation between them and ordinary physical laws. He received many honors during his lifetime, among them being the Nobel prize of 1917 for chemistry, and the Order of Merit in 1910.

THE END



**What mad—and monstrous—thing had
control of the High Junction telephone exchange's machinery?**



TERROR on the TELEPHONE

by LEE FRANCIS

THIS account is presented in part by Doctor Jean Medeor of High Junction, Colorado and made complete by the diary of Frederick Cool. Doctor Medeor is no longer alive to present what proof she may

have had of its truth. I am too tired and shocked to care whether or not the medical profession believes. Frederick Cool is also gone, yet the painful scrawl of his last weeks present a picture too pitiful to misbelieve and too fantastic

to dare accept as the whole truth. It is the picture of a man dying the worst imaginable type of death. For Frederick Cool's brain was stolen and he died insane. Do I confuse you? Listen to Doctor Jean Medeor's letter written in the early Fall of 1944:

Doctor Peter Fromm
235 Trust Building
Fresno, California
Dearest Peter:

I told you that it would be hard to stay in High Junction this winter. I'm lonely for those cloudless, warm skies, and for you. I'll stick it out, for I know that a young doctor, and especially one of the weaker sex, doesn't get a chance to hang out her shingle every day.

High Junction is up here on the Divide where it gets snowed in sometimes for several weeks. The temperature drops to thirty below and shows a strange reluctance to rise again. I'm afraid I'd rather be Mrs. Doc Fromm this winter, but I decided to become a career girl, and I'll stick it out.

I *do* have an interesting case. Frederick Cool is his name and he used to run the telephone exchange here at High Junction. I'm afraid he's slightly wacky, Peter. Yet, he's nearly sixty and quite harmless. He has the smoothest face and kindest blue eyes I've ever seen.

Cool came to me three weeks ago. He said he had retired from his job at the exchange, because they had installed one of these mechanical relay systems here for handling telephone calls. You remember the one downtown in Riley Township? A small, brick building, locked up, windowless, with a magic inside that sorts and puts through any call you care to dial? With them, one operator can handle several small towns. That gives you the picture.

Frederick Cool is insane for sure, Peter. I would say, after questioning him for some time that he retains only a vague idea of what goes on about him. I treated him kindly, advising him to get away from High Junction and take a vacation in a more friendly climate. He had a temper tantrum and wanted to know what a woman doctor would know about that. Threatened to change doctors. I reminded him that I was the only one in town and he calmed down a lot.

He said he was sorry, and that there was something that I ought to know about. I'll never forget how the poor old man affected me. It was a cold, unfriendly day to begin with, and a first snow had placed a wet blanket on everything, including my state of mind. Cool leaned forward and said:

"You see Doctor, I know I'm crazy. That's unusual, isn't it? Most insane people think that they are normal. *I know better, and I know why.*"

His words were spoken hardly above a whisper.

"I haven't told anyone," he continued, "and I'm not going to tell you. My mind isn't clear now. I couldn't remember all the details, so I wrote them down."

HE WAS wearing an old tweed suit with frayed cuffs, and trousers neatly patched at the knee with a slightly different colored fabric. He brought from his inside coat pocket a collection of papers. They were as many as the colors in Joseph's coat—pages torn from magazines with notes made in the margin—sheets from nickel scratch pads.

He passed them to me and ducked his head as he spoke, as though talking to the floor.

"I'm ashamed of the condition of my diary. I wrote when I could—when

my mind was clear."

Truthfully, Pete, I didn't want to read the stuff. I couldn't hurt his feelings.

"I'll keep this in my desk," I promised, and read it when I can. Perhaps it will give us a basis for treatment of your case."

That ended our conversation. He wandered out into the street and down past the new telephone building. It's a small, fifteen foot affair with a freshly painted, locked door. Inside, the mechanical 'operator' takes care of the job Cool used to take so much pride in. Cool hesitated opposite the building, then as I watched him, he shook his head slowly and went shuffling onward.

I didn't have time to look at the diary until the following Thursday. Then, as I expected Cool in on Friday, I scooped his papers from my desk, dropped them into my bag and took them to my hotel room. My room is very lonely, Pete. I guess I've mentioned that in every letter. I'll be very happy when I've proved to the world that I can be a good doctor, and have the chance to settle down and prove that I'm just as good a wife. Do I bore you, future husband?

Finally I put my bare feet on a hot water bottle, picked up Frederick Cool's strange manuscript and started to read. I intended to put it aside in twenty minutes. When the Central-Divide freight came through town at three this morning, I was still reading. Pete, I'm going to say the same thing that Cool did in my office the other day.

I'm ashamed of the condition of the diary. Cool wrote only when his mind was clear. He didn't write well. I tried to read with a cool, scientific approach. Now I'm exhausted and all tied up inside. I'm not at all sure of my own sanity. I'm sending the diary to

you because it has given me a queer, lopsided viewpoint on life. Perhaps the intense cold has affected my brain. *Perhaps I'm going crazy.* You're the only one I can depend on. I've always come to you when I couldn't plan for myself, and you've never let me down.

You're so far away from this icy bit of Hades, perhaps you can read with a clear mind. I want your clear, honest opinion of Fred Cool's manuscript. I'm only sure of one thing now. When I pass that tightly locked phone building on Main Street, I stare at the windowless walls and wonder if strange death lurks within the sealed crypt. For Heaven's sake, don't tell me I'm mad until you've read every last word.

I love you, Doctor, in case you've forgotten.

Jean.

The diary was in bad order when I started to assemble it. I became so fascinated by the worn pages that I asked my secretary to transcribe them at once. She worked on them as I read and soon the whole story was assembled in some order and ready for study. For some time, I wondered if a trip to High Junction would be necessary. It would be a good excuse to rush to Jean's side. However, we had both decided that we must live alone, at least until we could convince Jean's father that her study at medical college had not been wasted time and effort. We hoped that once she had proven her worth to High Junction, the old man would bless our marriage and accept me as a son instead of a rank impostor.

It was a difficult decision, but I knew that I must stay away from Jean as long as I could. We would weaken easily if fate threw us together much oftener. We planned to marry in the Spring.

Perhaps, also, the diary of Fred Cool had the power to upset a man's thought processes, until the reader felt that he might be slightly mad to accept the material he found on those pages. Perhaps I, like Jean Medeor, wasn't able to think clearly after reading so unusual a story. You may judge.

Doctor Peter Fromm
Fresno, California

THE DIARY OF FREDERICK COOL

MY NAME is Frederick Cool. I am an old man now, yet not old judged by normal standards. I am done with life. Even now I am dead. Dead as surely as though someone held a knife at my throat. More accurately, my brain is being dissected bit by bit, and placed in another receptacle, prepared for it long ago. It will go on functioning, yet it will not be mine. My brain is helping a killer. A killer so powerful and so subtle that no one recognizes it or is able to prepare for war against it.

Let me tell you why I die without a brain, without knowing much of what goes on about me—or caring.

Twenty years ago I rode into High Junction in an empty freight car bound for California. In those days, three engines puffed up the mountain, dragging their heavy trains over the hump. I was young then, disowned by my family in England and recently arrived in America on a tramp steamer. I stayed in High Junction. I hadn't planned to do that, but a yard detective found me, half-frozen, jumping up and down beside the freight trying to warm myself. He warned me to get away from the train and foolishly I tried to quarrel with him. I awakened in jail, a hard lump on my head where he had hit me with his billy.

A sheriff with a walrus mustache warned me out of town in twenty-four hours—"or get yourself a job."

My last dollar was gone. I went to work for the High House, a two story, shingled affair, where I got three dollars a week and a small room beneath the stairs where I could sleep. Those first years were hard. Somehow, High Junction got into my blood. I would lie quietly on my bunk at night, listening to the freight trains as they puffed over the Divide. I would listen to the thin, high scream of the train whistle and the howl of the north wind, and somehow, I knew that I'd never go beyond this place. I hated it, and yet it was home. Perhaps I didn't hate it at all. It had a power that kept me from going on.

I worked for the railroad, laying ties for a spur line up to the mine. I worked one summer, deep in the mine.

Then, at last, I had a steady job.

The job wasn't important to the world. It was very important to me. The day I walked into the dusty loft above the General Store, I was as proud as a king looking for the first time at his throne.

High Junction depended on the "valley" for everything. The "valley" was Denver. If a woman needed a doctor—if the hotel needed supplies—anything—they phoned the "valley" for help. The Mayor called the "valley" for a sheriff to come up after a murderer.

Every call—every bit of business transacted with the "valley" had to go through my office. I ran the telephone exchange.

I thought I was the most important person in High Junction. Once we were snowed in for a week. I walked a mile through waist deep snow and found the break in the wire. I made contact with a portable phone and asked for a

doctor to come and see Mayor Wiggins through a spell of the flu. Doc Deverish came. He had to leave the train three miles down the pass and ski from there. He saved Wiggins and the Mayor gave me a gold watch for doing what I did.

"You saved my life, Fred," he told me. "I was about ready to kick off my boots and give up the ghost."

Yes, I was very important to High Junction in those days.

IN LOOKING back across the years, I see many things clearly that at the time were confusing to me. I recall the first time I felt cause for alarm, and how it affected my entire nervous system.

I had been alone in the office all evening. It was well after midnight, and few calls were coming through. To some, the loft would have been a lonely place. To me, it was home. I had a small stove which kept me warm and brewed my coffee. I decided to close up for the night, and was banking the fire when the warning light flashed on above the switchboard.

No one was formal on the telephone in those days. I put the speaker over my shoulders and spoke.

"Yes—who is it?"

I thought I could recognize any voice in town, but I wasn't familiar with the cold, impersonal voice that spoke now.

"*This is you, Fred Cool,*" it said. "*Just testing.*"

Someone must be joking, and yet it didn't seem very funny at that time of night.

I chuckled, but deep inside, the voice gave me a start.

"I suppose, then," I said, "that I'm speaking to myself?"

There was no answer.

"Who is this—really?" I asked sharply.

I could have waited all night. There was no reply. I hung up. I was shivering slightly, though the room was warm. The complete strangeness of the voice troubled me. I returned to the fire and drank a cup of coffee. I tried after a time, to convince myself that the whole thing could be blamed on my imagination. It was no good. Then the *content* of the message started to get under my skin.

"*This is you—Fred Cool . . .*"

That sounded so damned silly that I decided I was a fool to be taken in by such an un-funny joke. I left it that way.

The next day I was careful not to say a word about the incident. I felt sure that whoever the person might be who had called, he or she would rib me about what had happened. Such an opportunity would be too good to miss.

No one spoke about it. The owner of the voice did not call again—that night.

Those were strange years at High Junction. The town wasn't much. The main road came through here once but they changed the road-bed to a deeper, safer pass over the Divide. It left High Junction a small iron-mine town with a single train that puffed through once a day, weather permitting. People kept to themselves. They went to the "valley" only when it was necessary. Each man was respected for what he was, and not for the earthly goods he had collected. I held a respected place in the community. Not an attractive man, I never married. I lived alone, and I suppose, seemed somewhat of a hermit.

I didn't live what was termed a "normal" life. I ate when I wished, slept part of the time at the hotel and part of the time at the exchange, and came and went as I pleased. Often I stayed

up throughout the night, taking care of emergency calls.

I tell you this, so you will realize, as I go on, that I knew how people talked about me. My actions, though strange, are explained entirely by the terrible fear that haunted my mind.

The voice spoke to me again at night, when a thunderstorm lashed at the mountains and lightning splashed its death lights across the water-swept crags. The storm was so violent that I failed to hear the bell ringing and noticed the warning light only when the lightning diminished and the room was quite dark.

I hurried to the switchboard, expecting news of fire or washout.

"How do you like the storm?" the voice asked.

I recognized it at once, though four months had passed since it had first troubled me. I was trembling, but I managed to steady my voice.

"It's—bad, isn't it?" I acknowledged. "However—I seem warm and safe."

I could never capture the quality of the voice. I could never explain it. Yet, I try here, for it was so important to know everything I could about it. If possible, it was a voice like drops of ice water plopping against my brain. It was cold and depthless, yet mechanical, as though recorded in hell.

The hair on my neck seemed to prickle and my heart pounded.

I said:

"Who's calling? I don't recognize..."

"Fred Cool," the voice snapped at me. "You remembered me at once. I could tell by the fear in your voice that you know me. You are Fred Cool—so am I. Amusing, isn't it?"

I was badly frightened.

"See here," I snapped. "I don't think this is funny. Perhaps I'm a

poor practical joker, but I don't like this..."

The voice was suddenly very angry.

"It's no joke. You will realize that soon."

DOC DEMOREST decided to come to High Junction. He was an old timer from the "valley." A good man, but tired. He wanted to escape the big town. I went to see him soon after he arrived. He was a sage as well as a medical man. In his dark office, pale faced, bearded and fortified behind a huge roll-top desk, he stared at me with twinkling eyes.

"Sit down, Mr. Cool," he said. "You don't impress me as a man troubled by minor ailments."

I was fifty then. I felt nervous and irritable. Often I forgot to speak to people I had known for years. Didn't even see them on the street, though they reminded me of our passing later.

I sat down a little heavily in the leather chair opposite him. I breathed a little hard and felt tired most of the time. I heard the voice often now. Sometimes I heard it in my mind, even though I was away from the office.

"I want a complete examination," I said.

Doc Demorest didn't move. His eyes weren't twinkling now. He stared at me solemnly, a little sternly.

"You're in good shape, Cool," he said. "Don't start taking pills at your age. Go home and forget it. You'll live a good thirty years yet."

I said:

"I'm not sure. I notice a falling off in vitality. People tell me I act odd. I'm absent-minded and a little—strange."

Demorest chuckled.

"We're all a little batty above the neck-line," he said, and tapped his head with his finger. "I'm crazy as a loon

myself, but people expect a doctor to act odd. I get away with it nicely."

Normally I would have laughed with him. I wasn't in a laughing mood. I had to get the whole thing off my chest. It needed telling.

"See here, Doctor," I said eagerly. "I've been hearing voices."

"Lots of people hear voices," he said. "Lots of voices to hear."

I grew impatient.

"I mean a very special voice. A voice on the telephone."

He leaned forward in his chair. He studied me with his bright little eyes.

"Make up your mind, man," he said. "First you heard voices. Now it's a voice. Is it a babble of voices or just one voice?"

I felt ill and miserable. I stared down at the faded green rug.

"It's a voice," I admitted. "A voice that doesn't let me rest."

I told him the whole story then. How, ever since that first night, the voice had tormented me. When I finished, he straightened in his chair, searched his desk for a battered pipe and packed it full of tobacco. His movements were deliberate. He was deep in thought. When the pipe was lighted he puffed deeply and stared at the ceiling. Then he rose and went to the window. He came back after a while and put a kindly hand on my shoulder.

"I'm an old man," he said. "You are approaching the boundary of old age. As one man to another, why haven't you married and settled down to a normal life?"

He made me very angry. He was like the rest of them.

"Get married and settle down," they said. "You'll go batty, living alone."

I didn't argue with him.

"Perhaps I should have," I admitted. "You see, I left the only girl I ever

loved in England. She turned me down when my family took away my chance to gain a fortune.

"True, I'm lonely at times. Perhaps I envy other men."

I stood up, staring at him, trying to get across what was in my mind.

"But don't blame my present condition on lack of companionship. It's something deeper, more horrible than loneliness."

He nodded.

"I can't understand it," he admitted. "Somehow your 'voice' sounds convincing. I have heard people talk about you. I can't agree with them that you are feeble-minded. It's something else. Something I can't quite put my finger on. I'll drop in at the telephone office some evening. I want to talk with you up there."

He opened the door for me when I went out, and I felt comforted by his understanding. I tried very hard that day to speak to all my friends. I was so careful to do so that I heard later that they stared after me when I passed. It was as unusual for me to speak to them as it had been to ignore them. They commented on it.

I was branded as a friendly but slightly warped old character. I did not imagine how much that affected my already faltering faith in myself.

AS THE years passed, I started to imagine impossible things. I talked often with the voice, yet knew no more now than I had to begin with. It always teased me until I often felt that I could stand no more of its merciless company. I wondered if it were possible to divide a man's mind into two parts and create two brains from one. I wondered where that other Fred Cool could be located, and spent hours trying to cudgel the answer from my tired brain. Hidden somewhere in that tangle

of wires behind the switchboard was another Fred Cool. A merciless, mechanical Fred Cool who had cold murder in his voice. He was murdering me, bit by bit. Driving me mad.

Doctor Demorest came often. He liked to sit near the stove late at night, after he had escaped his own work and talk about his boyhood in France. I often talked about my early visits to Paris, and because I had learned to love that city, I held a place of respect in his heart.

Though we visited in perfect harmony, I knew that he had another reason for coming. He watched me closely, questioning me at great length about the voice in the switchboard.

"Take my word for it," he said one night, "one day all you people will be replaced by the machine. Mechanical controls will dial the number and get the party. Small towns will not employ operators. One operator will take care of a half-dozen towns and the rest will be done by machine."

I agreed with him. I hated the thought of being replaced and having to leave this dusty, lovable junk room of the past.

I was older now. Older than my years. Though my mind was slow, perhaps even feeble, I handled the switchboard expertly, never faltering, never making an error. I was perfectly confident of being able to handle any number of complicated calls..

That night, the answer dawned on me.

Demorest came up about eleven. We had talked about the wonderful mechanisms to come. It dawned on me that I had been a little hazy and uncertain about things all day. Now, sitting at the switchboard, my mind was as clear as a bell. I had been away from the office all day, and a substitute had taken my place. How could I be so dense

away from the exchange, and so brilliant-minded when I was here?

"See here, Doc," I said, "don't think I'm entirely an ass. I enjoy your company very much but I know your real reason for coming here so often."

He chuckled.

"And what does the patient suspect?"

"That you are studying me," I said. "You know that I act queerly. So do I. You're questioning me, watching me—trying to guess just what really is wrong."

He frowned, then nodded slowly.

"I don't know just how to tell you, Fred," he admitted. "But the Town Council wants to replace you. There have been complaints."

That was a thunderbolt for which I was not prepared. I'm not sure that it surprised me, but I am sure that I was shocked severely.

"But my work here has been excellent."

He nodded.

"I know. But you see, Fred, you act like a half-wit when you're in public. Everyone notices it. Fred Beecher down at the store says you're as crazy as a loon. Beecher is boss of the Council."

"Blame it on the headaches," I said violently. "I have them all the time now. I feel like blowing up in everyone's face. I have to choke back my rage and my fear. My head is a roaring, empty box. I can't act like a normal, balanced human, with that monster stealing my brain away from me."

He looked very grave.

"You still hear the voice?"

I started to shiver. My hands were icy cold.

"Not for a month," I admitted. "But—it's there. It's there waiting for me."

His eyelids lifted questioningly.

"Still there, is it?"

I knew I had said the wrong thing.

It was an idea that obsessed me. I hesitated to share it with Demorest, but I had no choice now. He was the last person who could protect me.

"I'm crazy," I said. "We'll admit that for the sake of an argument. Doc, I'm sure that there is another Fred Cool."

He leaned forward, eyes half closed. His lips were tight.

"Go on," he said.

"ANOTHER Fred Cool," I said. My lips were dry. "He's behind the switchboard. A brain—a mind—whatever you wish to call him, hidden in the labyrinth of wires. He's—stealing something from me. He's taking my brain. I can think clearly when I'm on the job, because, actually, I'm not thinking at all. That monster in the board is thinking. That other self. That's why I feel confident and free when I'm here, and like a hopeless idiot when I'm not."

Demorest didn't say he agreed. He didn't say that he didn't. He sat very still, smoking, staring at the ceiling as he fingered his pipe. The room was very quiet. After a long silence, he arose.

"Come in and see me tomorrow, Fred," he urged. "We've got a big problem to iron out."

As I watched him leave, I knew that I had lost. I had sealed the crypt of my own fate. Doctor Demorest was finally convinced that I was quite mad.

I leaned forward with my head on my arm. I'm afraid I cried. It was very lonely and I was no longer a young man. It's hard to lose your last true friend.

I must have slept after that, still seated at the switchboard. It made no difference. The calls went through perfectly, correctly guided by the monster in the switchboard who called himself

Fred Cool.

Many changes took place in High Junction while I was away. Mostly changes for the worse. Main Street shrivelled and dried up for lack of paint and no interest in maintaining a ghost town. The daily train came only once a week now. Five hundred people remained, most of them miners, a few old timers.

I was almost a stranger in town now. A town of ghosts, yet to me a place of refuge. Doctor Demorest was dead. He had died a year ago, but it had been five years since I last saw him. Five long years since he had sent me to the state insane asylum. Because society condemned me and because I knew my job would be taken away, I went almost eagerly. Five years of sunshine and kind treatment had turned me into a weak, harmless type who could harm no one, and I was considered a fool by most people.

Jake Beecher, a teamster, gave me a place to sleep in his stables and I earned my keep by taking care of his horses. Old timers remembered me, and they were kind. Newcomers laughed at me. My clothes were not good and I'm sure my expression must have been vacant. I make these notes when my mind is quite clear and I can see these things. It is not often now that it remains clear.

Once I visited the lonely room above the general store, to stare a long time at the old switchboard. It is dead now, its wires twisted and broken, dust laying across it in a deathly grey sheet.

Doctor Demorest had been right.

The mechanical man had arrived. No longer does High Junction have a human operator. In a neat, square brick building on Main Street, a complicated machine lurks in hiding. It has the power to accept calls, sort them quickly

and send them in the proper direction. I know little about this wonder, and I have never seen the interior of the building. It is locked and mysterious.

I was able to find a certain comfort in lurking near the new phone building. The windowless walls hid everything from me. Yet, by going there, I am able to recapture some of the old spirit—some of the strength that is gone from my mind.

I know that people notice, and joke about my visits. I heard Jerry Beecher tell a friend:

"Old man Cool is harmless. Before he went batty, he used to run the exchange here. He and that telephone building have something in common."

I wanted to make them see that there was something in that building that was mine. The very brain—the mind that used to be mine—stolen from me and locked away in that tomblike building on Main Street.

It was late Fall. I had worked hard all day and when darkness came, I wandered to the phone building and sat alone on the steps. I was sitting near my own tomb. Sitting in the dark, a man alone, waiting for his brain.

"Hello, Fred Cool," the voice said close to my elbow. I jerked around, startled by its nearness. I knew the voice at once. A shudder swept through me. I hadn't heard it for five years. I tried to get control of my nerves, but it was difficult.

"H-hello . . ."

There came a sardonic, emotionless chuckle.

"So you remember me, do you?"

"I do," I said.

Another chuckle.

"So Fred Cool remembers Fred Cool. Ironical, isn't it?"

I had nothing to say. Dead silence followed. Someone passed on the sidewalk and stared at me. The speed of

the footsteps increased. Whoever it was, was afraid. *Afraid of me.*

"You've been away."

"I suppose you missed me," I blurted out miserably. "Missed the opportunity to grasp all that was left. To leave a shattered, useless hulk."

The voice sighed.

"No," it said. "No, I'm quite satisfied. You see, I have all I need. I knew where you were, for our brain is one. You are me, and I am you. You see, you have all the bulk of the brain and none of the ability to use it. I have nothing in actual bulk, yet all the ability to think. That leaves you a half-wit, while I am a human mind, plus mechanical perfection. A very high quality, Cool. Very high."

I UNDERSTOOD it. A great mind in a maze of wires, unable to act for good or for evil.

"I'm growing tired of this place," the voice said. "These people are so much like insects. Trivial things occupy them. They trouble me for all sorts of futile, silly things. I'm developed for greater fields, Cool. Our brain was a very fine one. You remember that."

"What do you propose to do?" I asked cautiously. I was responsible for this monster. I had to learn what it planned. I had to prevent . . .

"I will destroy High Junction," the voice said calmly. "Destroy it person by person. Then there will be no use of a telephone office here. They will take me and my complicated equipment to a larger, more interesting place. Perhaps, if I am not satisfied, I will go on destroying."

It sounded impossible. I might have been apt to blame this nightmare on my own warped brain. Yet, how could I? It was my brain that was talking. I wanted to run from this accursed spot

and never return. Still, Fred Cool planned these terrible deeds, and *I* was Fred Cool.

I sought information that would help me destroy the brain that was my own.

"You cannot destroy anything," I said. "You can't escape from the building. You're tied among the wires."

The voice was metallic and grim when it spoke its last warning.

"Remember, Fred Cool, that there is always a way. Wait for Winter to come, and you will understand my plan."

A new doctor came to High Junction this week. Her name is Miss Jean Medeor, and she is as lovely as she is kind. In many ways, she reminds me of the girl I left in England so many, many years ago. I'm sure that she will be successful, although I don't know why she chose such an out of the way place to start a practice. She told me that she was in love, and that she wanted to be far away from her lover, as it would prove whether she could be a success or not.

I don't understand just what she means, but when I see her, with bright blue eyes, and a smooth, intelligent mouth that shapes itself into sympathetic ovals as I talk to her, I feel as though I want to cry.

I am very lonely and she makes me relive those first days, when I, also, had so much to live for.

Perhaps it was her youth and understanding. I told her my story, and left my diary with her. I know that in her heart she does not believe me. Perhaps she will when she reads what I have written. I pray that she does, for she is my last salvation.

Winter has arrived. A storm swept down from Canada last night and now the voice will act. I will try to save High Junction. I *must* try. It is my own brain that threatens to destroy it.

THE STORY OF DOCTOR PETER FROMM

MOUNTAIN PASS SNOWED IN

Mining Community Cut Off From World

"A polar front, sweeping down from the Canadian Rockies late yesterday, brought a blizzard that cut off High Junction, Colorado, from contact with the rest of the world. The town, inhabited by approximately five hundred miners and their families, cannot be reached for some time. The railroads are tied up with more urgent clearance problems on the main lines. Phone contact has been maintained and citizens of High Junction report that everything is satisfactory in the community. They say that help will not be needed at once."

I stopped reading at this point, and cold fear swept through me.

Phone contact had been maintained.

Frederick Cool whom I had long ago accepted at his face value, had said that the brain would get its revenge when winter came. Somehow, I knew that this was it. I had tried a number of times to imagine how a telephone relay system could get revenge. How it could harm a town. It seemed incredible, almost laughable, until this moment. Now I thought I understood.

The telephone reported that everything in High Junction was all right. It lulled the fears of the people in the "valley." It made them feel that they need not hurry. That time could be wasted.

Cold perspiration broke out on my forehead. I thought of Jean Medeor isolated up there behind a wall of ice and snow. Jean, fighting alone against

—God knows what odds—probably at this very moment trying to contact me.

I hurried back to the office and placed an urgent call. I heard the operator in the "valley" speak to Jean, and then she was on the wire.

Or was she?

The voice sounded like hers—and yet it was metallic, and a little abrupt. Not the voice that Jean would use when we had not talked for several weeks.

"Hello, Peter. I'm so glad you called. I'm all right. I suppose you've heard that we had a bad storm?"

I DIDN'T like that. She anticipated my worry. She—if it was she—was trying to show me that she was all right.

"Jean," I said. "That business about the phone? Has anything happened?"

"Everything is under control," she said. "Don't worry about me."

Mechanical—metallic—the voice of a machine

"Oh," I said. "Oh, well, I thought I'd better check up on you. After all, I do worry about the girl I'm going to marry. Can't find one who'll accept a poor doc every day in the week."

She didn't laugh.

"Everything is under control," she said again. "Don't worry . . ."

I hung up abruptly. I swore under my breath. I hadn't talked to Jean. I had talked to a monster. A mechanical, murderous ventriloquist. I sat there for ten minutes, thinking—trying to plan. Then I hurried to the apartment, packed a single bag, put on the warmest clothing I could find and caught the afternoon plane for Denver.

I must have seemed foolish, rushing around the dinky offices of the Central Divide Railroad Company, trying to stir up some of the lethargy that seems

to exist when a man wants something done and can find no one to do it. I talked with Jake Punks, president of the tiny spur line that ran through High Junction. He was a slim little man, partly bald and carrying about that expression of one who could very easily go crazy if one more person asked him a foolish question.

I couldn't tell him why I was here. I could only tell him part of it, and that didn't make sense to him.

"But we've been in contact with the Junction since yesterday," he protested. "There's a good doctor up there, plenty of supplies, and they tell us that everything is under control. What more can you ask for? We haven't the equipment to send up now. In a couple days . . ."

In a couple of days . . . ?

I couldn't wait, and I couldn't convince anyone here that I was anything but a half-baked medico who had bats in his brain and was releasing them upon a much too busy world.

I had to get to High Junction at once.

I bought a ski outfit, packed my bag full of supplies and started alone. A farmer took me up the canyon as far as his car would go and dropped me there with nothing but mountains of snow and ice ahead of me.

He shook his head when I said I was going through to the Junction.

"Thirty miles almost straight up," he said. "Don't try it, Mister. The canyon's got fifty foot of snow in places. Slides and stuff ain't to be fooled with. You'll never get through."

When I thanked him and started out, he called after me.

"If you get lost and can't make it, stick near the tracks. They follow the river all the way up. The rescue crew will be through. They'll pick you up."

It was cold. So cold that it crept

through me in ten minutes. I've never been good on skis. After a half hour, the scraping of those skis against the snow started a little tune through my brain. It persisted hour after hour, until at last, when I fell exhausted beside the trail, I was still saying over and over to myself:

"You'll never get through—you'll never get through — you'll — never — get . . ."

They said that it took longer to "thaw me out" than any man they'd ever seen. *They* were the train crew, and through some fortunate incident, they had been able to leave Denver much sooner than they had expected. In fact, the rescue crew left town on the same afternoon I started that hopeless skiing trip up the pass. My heavy clothing had saved my life.

I was still weak, but I had eaten hot soup and sat with the men in the caboose of the train. Ahead of us, a huge rotary plow fought its way up through the canyon.

The rotary broke down time after time, and the crew had to dig away the drift to give it a new hold against the snow. The river left a torn, black line down the canyon and the cliffs rose on both sides, dark and ominous.

We reached a high, flat plateau above the pass. Great peaks flung up their teeth like heads, making a circle around the flat waste of snow.

Ahead of us, where the town of High Junction should have nestled in the valley, there was nothing but a jagged pile of ice and snow.

One of the men swore softly. We stared at each other, our silence conveyed an understood message. Then the old brakeman said:

"They—they said everything was all right. That we didn't have to hurry."

"What's happened?" I asked.

The brakeman turned red, swollen eyes toward me.

"That's—High Junction," he said.

The train plowed ahead slowly.

"I seen the same thing happen over in Skinner Pass, 'bout sixty years ago," the brakeman said softly. "Slide came down and wiped out a thousand of 'em in one night. It was a hell of a mess."

The thin, eerie scream of the whistle announced that we had gone as far as we could go. The snow was twenty feet deep on the level. Ahead—God alone knew how many feet of jagged ice lay piled on top of the tiny hamlet.

IN A few hours, the engine had returned to the valley and brought us a complete rescue crew. Huge shovels worked in the moonlight, digging down to what had once been a town.

I guess they knew it was a useless job before they started. One thing kept them working steadily, throughout that long night, and other nights to come. Somewhere, down there at the bottom, there might be someone—something that still breathed. Up until a few hours ago, they said, they—had maintained phone contact with the town. I knew differently, but I couldn't tell them that.

But High Junction was gone. Gone as completely as though the great glacier had swept down upon it, crushing it to the ground.

I couldn't have stayed if it had not been for Jean. I borrowed a shovel and went to work with the men. Spotlights swept across the snow. I worked for ten hours before I could see what once had been Main Street. Fate intervened then, and I found that according to a small map Jean had once drawn of her accepted "home town," that the main tunnel was but a short distance from her office.

I worked without feeling now. My emotions were long since frozen by the cold and the utter horror that was inside me.

At last with the help of my new-found friend, the brakeman of the rescue train, I located Jean's office, and found the broken plate glass with *Jean Medeor, M.D.* painted across it. The roof had collapsed, but near the stove, where we found her, the snow had not crushed everything from sight.

The stove itself was still warm, and she was close to it. Three timbers protected her body from the crushing weight above.

I didn't stay in the room. The brakeman said he would wait until a stretcher came down from above. I found a letter which she had been writing to me when it happened, and I took it out and up to the surface. I hid myself as far from the others as I could, and read it. It was my last contact with Jean, and I wanted to share it with no one.

"Dearest Peter . . ."

That was the most tender, pathetic greeting I had ever read.

"Dearest Peter:

Fred Cool came to me today. He was exhausted and so frightened that he could hardly speak aloud. Last night he talked again with the voice—the brain. He visited the crypt of death that we so foolishly call the phone building.

I had to go with him—to see what he had seen. I had to stop guessing and satisfy myself as to my own sanity.

I met him at ten last night. High Junction retires early. We were careful not to be seen together on the street. Cool opened the door, for he had stolen a key. We slipped inside.

The storm was growing bad. I'm very much frightened when the wind comes down from the north. It does

strange things up here—landslides—houses buried until Spring.

"Nothing to be afraid of," I told myself. "If Pete were here . . ."

It wasn't what I saw in that building, Pete. *It was what I felt.* In the darkness I could see only the ghostly wires that crossed and recrossed into banks of metal cabinets. There was a steady clicking, and the hum of power.

I *sensed* the other Fred Cool. I had long since accepted the fact that the voice didn't actually exist. It could contact Cool through thought waves, but could not be heard aloud.

Another Fred Cool actually lives in that icy, tomb-like place. A Fred Cool that is evil and a monster of death.

Fred Cool was ahead of me in the darkness. I could hear his breathing, as though even then he could hear the brain speak to him. He turned and I felt his hand on my shoulder.

"Go back," he whispered hoarsely. "Go back. I didn't realize. It is too late."

A PANIC seized me and I turned to run. I was frightened as a small girl is frightened on a moonless night. I heard a small, pathetic sigh behind me, but I dared not turn back. Outside, I turned in time to see the door click behind me.

Fred Cool never came out. The door closed before he could escape. I ran back and pulled on the handle. It was locked. I started to pound on the door, half crazed, wanting to help the poor old man inside. I heard a voice purring in my ear. At least I thought I heard it.

"*This is none of your business. There is only one Fred Cool now. He cannot be saved.*"

I must have gone on pounding on that door, because someone came up the walk and spoke to me.

"Why, Doctor Medeor, what's going on?"

I pivoted and stared into the eyes of Mayor Joe Green. He had a puzzled, twisted grin on his face.

I tried to laugh.

"Guess I'm crazy," I said. "I've always wanted to see the inside of this place."

I know that sounded crazy, Pete. I know that I acted the part of a fool, but I just couldn't think straight. I had to say something. Green kept on smiling.

"You sure take a funny way of getting in," he said. "Next time the inspector comes up from the valley, I'll have him show you through the place."

He took my arm and guided me down from the steps. It's no good. Do you understand, Pete? Cool's body is in there. They take me there and they'll find it. They'll remember tonight and that I was there. They'll want an explanation that I dare not give.

I must destroy the building, Pete. The monster lurks within it, ready to strike. They'll catch me and I'll die for the murder of a man who came to me begging for peace. Peace from his own brain.

That monster grew bit by bit, sucking knowledge from a human brain. It hides there, partly wire and partly matter. Thick, clever and murderous. It must die, as I sooner or later will die, for murdering a man whom I tried to help.

That's my problem, and I need you, Pete. Need you more than anyone.
Jean."

THE letter was complete. Her signature was there and the envelope was addressed to Fresno. The stamp had been placed neatly in the upper right-hand corner.

I had a job to do. I couldn't help

Jean now. But the telephone building was still standing. The brick walls had withstood the battering ram of ice and snow.

I visited High Junction again that week, after spending a day in Denver. I rode up in a freight car, hiding myself from anyone who might recognize me. The car was filled with empty coffins, going up to the Divide to their rightful tenants.

In my bag I carried twenty sticks of dynamite.

The streets were clear when I came back to High Junction. The buildings were gone. Sprawled, ugly beams were everywhere. Men worked silently by lantern light.

I found the phone building and here there were no lights at all. Fred Cool's brain was alone, untouched, untroubled.

I packed the dynamite carefully into the small ventilation opening near the base of the structure. I broke the last stick and pushed the last of the brown powder carefully into place. Then I thawed ice with my breath and watched it freeze again, a tight seal over the explosive.

The fuse was long, and I was safely away from the place and mingling with the rescue workers when the place blew up.

The explosion rocked the mountains, and as I stared back at the dark, unhealthy cloud that reached into the sky, I fancied that I could see the spirit that hung over the place. It was like a black, fearful cloud of death that faltered and sifted to the earth destroyed, leaving only ashes and bits of broken wire.

There is no more to my story.

I think it fitting that I rode back to the valley in the same car, with the same load of coffins. This time I rode with the girl I loved—Jean Medeor.

The world was dying — and
Death stood astride the planet,
waiting . . .



ONE MORE SPRING

by FRANCES YERXA

**Chlorophyl is that green stuff in plants
and it means life to the earth and to all the
animals that live on its flowering surface . . .**

BEADS of sweat stood out on Bart Gifford's forehead. He placed the hypo on the table. His arms, bare to the elbow, were streaked with green. Gifford's shoulders were broad and his tall body seemed to indicate great strength, yet as he leaned over the tiny test-tube of green jelly, his fingers shook.

He straightened, looking worried. He waited for five minutes, hardly moving, his eyes on the test tube . . .

Outside, hoof-beats disturbed the quiet summer afternoon. They slowed to a steady *clip-clop* near the corral. Gifford sighed and took off his shirt.

He washed in a small lavatory in one corner of the room, found a fresh shirt in the closet and put it on. As he went to the door, he stopped to take a last look at the test tube. The stuff in it was still green.

He frowned and went outside. A hall led him to a wide, screened porch. Beyond the porch was a wide, dusty yard, the corral and the prairie. Far beyond the prairie, the Teton Mountains arose in jagged, tooth-like formation toward the hot sky.

Jeff Stern was coming up from the corral. His face was dusty and his eyes looked dull and almost frightened.



His face was made up of sharp angles cut by a stern, straight mouth. He slumped down into a chair beside Gifford.

"Hello, Jeff," Gifford said. "How did it go today?"

Jeff Stern turned slowly. His voice was full of despair.

"You know damn well how it went. Bart, I got to know what it's all about."

Gifford tried to smile. It wasn't any good. No, he couldn't tell Stern that the world was dying. People couldn't be told that. They had to go on trusting, believing.

"Nothing wrong, Jeff," he said. Atmospheric condition. We've had a long, dry summer. When the rains come, everything will be okay again."

Stern stared down at the dusty earth, the dried-up flower beds.

After a while he said:

"You came here for a purpose, Bart. The Institute doesn't waste its best men on wild goose chases. You brought lab material with you. You've been in ten different states, and you've been getting code wires from China, England and all over the map."

His black, snapping eyes appealed to Gifford for help.

"The wild things are dying, Bart. Are they gonna keep on dying?"

Gifford was thinking.

I wish to God I knew, he thought. *I wish I could see into the future.*

He shrugged.

"I—I can't talk now, Jeff," Gifford said. "You see, it's a big problem. Maybe a hundred men of science know, or think they know what's going on. If they let the information out to the layman, well, there'd be a panic. People don't react gracefully to such things. They are apt to go back to animal standards. To murder and fight, and make things generally worse for themselves."

Stern said nothing—waited. He was sure that Bart Gifford wanted to say more.

"I'm a man, Bart," Stern said. "I was shooting my way into this country before you were born. I can keep my mouth shut. I been thinking that things weren't going to be good. The grass is dead on the north range. The cotton-woods are hanging limp, like bodies with the blood gone out of them. *I want to know why.*"

Bart Gifford sighed.

"You have to know sometime," he said in a low voice. "Everyone has to know. The plants are dying, Jeff. Every form of plant life, dying for no reason that we can fathom. *Do you know what that means?*"

He leaned forward, gripping the arms of his chair. The panic that had been in his brain for weeks now—months—showed in dark smouldering eyes.

"Do you know what that means?"

The same question, asked a million times a day, and never answered. The same frightened, bewildered voices. The voices of men who wanted to know. *Had to know if they were to find a way to save the human race.*

"Do you know what that means?"

Professor Hiram H. Biggs, Naturalist, Bangor, Maine, in an interview with reporters of the New York Times, one month later:

"Gentlemen, I'm only a man. I've lived in the woods all my life. You can tell your people for me that I have no explanation. I noticed during the early summer months that the smaller plants were dying. I could find no reason for this. Study under the microscope shows that plant cells are drying up—becoming unfit to reproduce. The forests north of Moosehead Lake are dead. Pine trees, brown, rattling their dead limbs in the wind—that lost world is creeping south. Maine is giving up

to death. The life blood of the state, and of the world, chlorophyl, is dying."

They didn't know much about chlorophyl, these reporters who visited the first state to die. They went to Harvard and talked with Bertram, world renowned chemist and biologist.

"Gentlemen," Bertram told them, and his eyes were sad, "Chlorophyl is the basis of all life. It is the life blood of every plant and thus, *our* life blood. Chlorophyl, if you will have an explanation, is the perfect alchemist. It transmits sunlight into living tissue. That tissue gives us our food, our necessary raw materials, even the precious air we breathe."

Bertram sighed.

"Chlorophyl is refusing to do its work. It is dying. That means that the human race must die with it."

When he finished, the fifteen men who had come to listen, asked many questions. Each was answered, each—that is, but the last.

"What are we going to do about it? Men have faced big problems before. They can surely solve this one?"

Silence, then a thoughtful, slowly spoken answer.

"Men are small. No larger than the ant tribe, if you compare them with the planet world. The plant world came first. It outlived everything else. It supported life and nourished it. If the plants die, we die. There is no answer to that."

And so, news went out to the world explaining why the summer was so uncomfortable, dry and hot. Nothing serious yet, the papers said. Just sections of the country touched by the mysterious finger of death. Dry, burned forests and dusty, plantless fields. The finger of death, pointing lightly at man. Pointing, and leaving it a mark.

The United Vegetable Producers of Southern California — Report to the

Nation published in all national magazines, August 1954—

"We regret that we will no longer be able to supply the nation with our speedy, refrigerated service. Crops this year dropped to a point where shipping is impossible. All fruits were blighted. Vegetables turned brown and plants died, even in our lush valleys of California. The government offers us no solution for the strange disease that has stricken our lands. A group of our experts is at work . . ."

The report filled three pages.

No more vegetables for the tables of New York, Chicago and the thousands of towns served by this company and others like it.

SEPTEMBER 1954—The United

States today is living chiefly on meats, but the quality of meat is growing poor. No feed is obtainable and pasturage is slim. Vegetables are quite out of the question, save for the runty variety of plants nourished in our small Life Blood gardens. Health standards are down and doctors advise mothers to consider the question carefully before bearing children. The situation is bad. We are the first to admit this. Some hope is felt that the group of one hundred men of science, working with this administration, will affect a solution . . ."

Partial Report of the Department of Agriculture.

Some hope is felt.

Shanghai, China, October 16, 1954 —Fifteen thousand peasants died this week in Shanghai. There is no food, and there will be none. China, oldest of countries, has faced famine and war. It has survived untold centuries. Now, because nature has so chosen, it dies. It strangles and starves and chokes, a huge nation, lost because plants refuse to grow.

London, England, same date—The London Times today stated that country people should make every attempt to keep their gardens watered, free of insects and carefully weeded. Although the situation facing the Kingdom is no doubt serious, Parliament will meet next week to . . .”

Parliament will meet next week.

Parliament could meet next week, and every day following that. There was one thing the people could not grasp. This was not a war. It wasn't anything you could handle by laws.

The plants were dying, and when they died, the world died. It would become a dry, hot dust ball, on which no man could live. The oxygen, thrown off by the plants, would not be here to breathe. The animals could not feed on plants and the men could not remain to live on animals, and there it was—like that childish poem—something about the pig bit the cow and the cow bit—senseless, like this was senseless. No plants, no food, no air. Death.

Some hope is felt.

Man is warmed by the sun. Without the sun, man cannot live. You learned it in school—lower grade.

But—man still had his precious sun, and he could do nothing with it. It burned each day, a fiery, dully furious ball, sucking up moisture and giving nothing in return.

“Why?”

Because, for untold centuries, men had failed in a simple task. Failed to convert the sun's rays into living tissue.

Chlorophyl did that. It performed the delicate, seemingly impossible chemical change in less than a second. It fed the insects, the birds, and the animals. It breathed up the poisons of the earth and sent off pure air.

Could man do it without the plants? Man had tried for centuries to dupli-

cate the job of chlorophyl. The answer was no.

Some hope is felt.

BART GIFFORD, neat, well dressed, always hopeful, stood at the head of the long table. There were many men here. Some greater than he, some from more humble places. They made up the last pool—the last group on earth who *might* save the race. They weren't hopeful.

Gifford said:

“We know what the situation is now. We know that this wasn't caused by anything man can remedy. When the flood comes, no dam will stop it. When the rains come, we don't shut them off. This is no blight. It isn't caused by insects. We have decided that there is no explanation. The plant world is tired. Many times before, parts of it have died and others have arisen to take over. This time, the whole world of plants is dying. We can't prevent it. Every country of the world has reported like conditions. Slowly, as though death were pleasant, forests dry up and become lifeless. There is no material that we can mention that will not be cut off from us. The air itself will become deadly.”

He hit the table lightly with his open palm.

“Therefore, I say we cannot longer deceive the people. When the worst is known, they will prepare themselves and know what to expect. There will be panic. Some will be at ease for the first time in months, when all their doubts are cast aside.

“I say that we should release our findings to the world and let it prepare itself for death.”

A sigh hissed through the chamber. A sigh so gentle that it might have passed for one man, breathing his last, cool breath of air. Then a vote was

taken. The world must know the truth.

Men sat late that night, pooling their knowledge, preparing the report to the world. A world doomed because green things would no longer be green, and air and food would be choked off, leaving nothing but poison and death.

How it was in other countries, one does not know. The United States is huge, and the misery there was a reflection, slightly better or worse, of what went on throughout the world.

The pace of a man's walk was changed. He walked slowly, dragging his feet. Factories closed, for no one would buy their products. Food was still here, but in small quantities, for the gardens did not die all at once. They died slowly, and everything fit for storage was treasured at high, black market prices. Murders were many and few crimes were solved. Man's hatred and desire for revenge grew great. Short tempers—poor nerves—shrinking bodies.

Maine was deserted. California was a desert, dry and dusty in the Spring of 1955.

The South no longer had deep green swamps. They were mud holes, with gaunt, leafless trees hanging over them. Beneath the water, huge alligators tore each other apart and fish fed on fish, the weak dying first. The strong held on.

All animals have much in common. The weak die first.

BART GIFFORD'S coupe sped down the last stretch of concrete road toward Lansing. He had enjoyed coming here in years past. There was a small lake on Lem Water's farm, just north of Lansing. A lake where the Waters and the Sterns of Wyoming met every year to live peacefully for a month, bathing, fishing and relaxing.

Lem Waters always cleaned the big

cabin in the pines just before the Stern family arrived. He swept it out carefully, and laid logs in the rock fireplace for that first night when old friends meet. "Peachy" Waters, childhood pal of Gifford's, the yellow-haired kid who had ducked him for the first time in the blue water of the little lake, made the beds and put a couple of pine cones under Gifford's pillow. She was a sweet kid, he thought soberly. Too bad her kind had to die.

He started feeling a little happier after he left Lansing and turned North. It wasn't really happiness he felt. It was the automatic recurrence of an emotion he had felt for years at this time, and it made him feel warm and excited, at least for a time.

Gifford had grown up with the Waters family. Grown up and gone through Harvard to return each summer for this one month of complete relaxation.

Lem Waters and Jeff Stern had been boyhood pals until Stern went West. That made the party just right, Gifford thought.

Lem and Jenny Waters, and Jeff and Dora Stern. Then, Peachy with her girlish, laughing fun, and—Jane.

He pushed Jane Stern out of his mind abruptly. None of that this summer, he told himself. Love and death don't mix.

"Till death do us part."

No room for sentiment, at least until the problem was solved or the race was dead.

He reached the hill above Gifford Point, where you could look down into the pine filled valley and see the round, depthless blue of the lake. It took his breath away, and he remembered Pea-body's last letter.

"The lake is the same. The trees are still green. We're quite happy. We'll be looking for you."

He fed the coupe a little more gas,

turned on two wheels down the muddy, rutted road that led across Lem's pasture. The cabin was in sight, nestled among the evergreens. The cabin was brown and rich looking with grey-blue smoke drifting up from the stone chimney. It looked secure, locked away from the rest of the world.

He saw Jeff Stern's Cadillac parked near the door. He took a quick breath. In spite of his resolutions not to let Jane affect him this year, his heart started beating a little faster.

He drove up beside the Cadillac and parked. He started to get out. A girl, small, beautifully slim, came out of the house. Her blonde hair waved gently in the breeze and the sun glinted on her frock, the color of her hair.

"Bart—you *did* come."

She ran toward him, her arms open, and he was prepared for her.

"Peachy?"

There was a question in his voice. A puzzled, bewildered question. Peachy always came to him like this. Brother and sister. Pals. He would grasp her by the elbows and lift her, kicking and screaming, into the air.

This time she melted against him, her head on his shoulder.

"Peachy," he said, and his throat was all choked. "Lord, how you've grown, Sis."

The warmth of her was exciting, and it made him angry at himself.

JEFF STERN came out on the screened porch, and the others followed. They were shaking hands, and Bart was kissing the older ladies on their foreheads. Peachy stood close by staring at him with deep blue eyes, waiting for them to be alone again.

He knew that. He knew it so surely that it made him nervous.

Jane Stern came out last. Her blue-black hair made a startling contrast to

Peachy Water's golden fluff.

Jane was Gifford's age, slim, sophisticated, finishing school material. She took his hand and it was warm and dry. She stared into his eyes, telling him she remembered all his words, every kiss. Telling him she wanted him.

"It's nice of you, Bart, to come when—things are so . . ."

Her voice broke, and a shudder shook her body.

"Hey," Jeff Stern said in a loud voice, "Bart's hungry. We're all hungry. Bet those pancakes are burning right now."

Jenny Waters, tiny, honest-faced, and full of the responsibility that was hers, uttered a flustered:

"Oh!"

She rushed back into the cabin, and her husband, Lem, started to chuckle.

"Leave it to Jenny," he said. "The pancakes will survive until we get to them."

They all went inside, and Gifford washed and put on a clean shirt. When he came down from his room, his mind was on the pine cones Peachy had left on his pillow. They made the room smell wild and clean. They made him wonder about Peachy, and how she had grown.

She wasn't in the kitchen. The others sat down with him at the big pine table and they ate. No one mentioned Peachy. Once, staring out the window toward the lake, he thought he saw her bright dress fluttering against the blue of the water.

Peachy was down on the dock, alone.

He looked from one face to another, seeking an answer. No one gave away Peachy's secret. No one, perhaps, but Jane. He didn't question it then, but Jane's smile was possessive, and perhaps a little too sure. He wondered how Jane would stand up when the world really started to go to pieces. He decided that her nerves were strong.

She wouldn't break.

The three men sat alone in the flickering light of the fireplace. Their faces were sober. The women were in bed. It was the first night. The first night at the tiny lake where life had fought to remain life—and was still green and good.

Lem Waters had a stern face. A thin face, with kindly eyes. His eyes, Gifford decided, were really a reflection from his heart. They were brown and depthless. They gave off a light of goodness.

"To me," he was saying quietly, "it don't mean so much. Perhaps I'm selfish, but I'm tired too. I've worked hard for sixty years. Mom, she's ready. They can't tear us apart, Hell or Heaven."

He sighed and his head bent forward heavily.

"It's Peachy I'm worried about. She's young, and there's a million more young ones like her. They've just tasted life. They ain't ready for to meet the Almighty. It's tough on Peachy."

Was that why Peachy stayed away from dinner, Gifford wondered? Was she frightened, trying to run away from death?

"Take me, now," Jeff Stern, "damned if I want to die. I'm a fighter, Lem. I fought my way west fifty years ago. Dug and scraped and built me a home where there wasn't nothing but sagebrush and cactus. Dora's a strong woman, and so's Jane. Jane's gonna take it all right. We've talked it over. Jane's younger. She'll live the longest."

GIFFORD closed his fists tightly. It was hard, listening like this. Listening to a billion people all over the world, waiting to die, preparing for it in different ways. Some of them took their own lives, because they couldn't stand the strain.

"She'll take care of Mom and me,"

Stern was saying. "We got a grove of cottonwoods down by the creek. Nice place to be."

He grinned apologetically.

"Of course, them cottonwoods don't look like they used to. Mom and me planted 'em forty years ago. They started with us, and darned if we didn't outlive 'em."

"By a little while, anyhow," he added softly.

"What you think about it, Bart?" Lem Waters asked.

"Huh?" Bart Gifford was thinking of the cottonwoods, dry and lifeless.

The Sequoia would be the last trees to die, he thought. The mighty trees that grew on the west coast. The trees that had survived everything. Born before Christ, the great trees had heard pterodactyls battering their huge bat-like wings among their branches. Trees that had witnessed the evolution of the mammals and watched prehistoric rodents gnaw at the shells of dinosaur eggs.

"I said, when do you think it will come. The final reckoning, that is? How long you think we got?"

Gifford shook his head.

Don't tell them. Don't tell them.

When will it come, they ask? It will come in a month, weeks maybe. No more vegetables from the great producing states. A few more head of cattle from places like his. A few wild animals, snared and shot by starving people. Then no food, even for the animals, and you go out and shoot at starved, diseased things unfit for food. The air is bad to breathe. It will be worse. A vacuum of poison will sweep in, and finally, nothing.

"I don't know," he tried to sound cheerful about it. "Of course, there's still hope."

"There's still hope."

Jane Stern heard him say it at break-

fast, and her eyes went from face to face, searching first one and then the other. Her heart beat wildly. Could she believe? Jane Stern was frightened. Frightened mostly of herself.

Randy Williams came down from Tawas that morning. Randy, old friend of Jane, had received a letter from her only last week.

"Dear Randy—

Remember the fun we had in school? I'm coming East again this summer. Will you come and see me? Dad says you are welcome to stay at the cabin on Mr. Water's farm. It's a nice place, really. A little dead, but pleasant. *Things are pretty bad here . . .*"

Things are pretty bad here. There was more to the letter, but that was the one line that betrayed Jane's fear. She needed friends. Needed Randy, and Bart Gifford, and her Dad, strong and ready to fight.

Randy Williams was handsome. He handled the road work for a big contracting firm at Tawas. He was twenty-six and had a keen jaw, dark eyes and a way of smiling at women that made them excited by his presence.

By noon he was established in the last bedroom and they were all sitting along the dock watching Brad Gifford and Jane racing back and forth from the raft to the beach.

Randy Williams took possession of Peachy.

"Jane said you were nice," he said, making sure that the others were too far away to hear, "but I didn't expect an angel to be waiting for me here."

Peachy was watching Brad. Watching his brown, well muscled arms as they flailed at the water. Watching Jane, slim confident, keeping up with him.

"Thanks," she said. "I suppose I owe you a quarter for that compliment?"

Williams was at ease, confident.

"Not a penny," he said. "Shall we swim?"

She accepted the challenge and they stepped into the clear water and headed for the raft.

A new friendship was born. Born when death was close.

They all felt it—feared it. They tried to ignore it and each played a part in the drama.

It was at night, when darkness hung over the lake and night birds whistled plaintively, that the hurt came. Then, each lay in his or her bed panting, trying to get enough of the sweet, warm air. Each fought terror by prayer or by cursing at what was to come.

Brad Gifford didn't fight. He waited—still hoping—always confident that if death came, he could face it.

Then the blight hit Lem Waters' tiny valley. It came in the night, and in the morning, its deadly, colorless hand was above them, the finger of death bringing something inexplicable that sucked up the green of living things and left them burned and fallen.

Death to one man is bad.

Death to a world is almost more than a mind can stand. It does something to man's soul, searing it over—killing his faith. When all hope is gone, it kills the body where the soul was housed.

BRAD GIFFORD found it first. Found the tiny evergreen, hardly over a foot high, with its sapless little trunk and brown needles. Because he was a lover of nature, he brought the sapling into the cabin as tenderly as he would carry a child. He placed it on the table. They were all there. Jane and her mother were talking in the corner, looking out of the window at the lake. Peachy and Randy Williams were conversing seriously near the fireplace. Stern and Waters were in the

kitchen, taking their turn at washing the breakfast dishes.

"It's come," Gifford said. Something in his voice startled them. Something final, as though he was reading a death warrant. The conversation stopped. Dora Stern came to the table and stared down at the sapling.

"Burned," she said, almost in a whisper. "Just like the evergreens on the north range."

"Burned?"

"No, just sucked dry. Dead, without green—without life—"

Without chlorophyl.

Randy Williams came over, picked up the evergreen, then tossed it on the table again. His lips curled slightly as he regarded Gifford.

"Trying to scare us?"

His voice was challenging.

Gifford said nothing. He knew little of Williams. Williams had come at Jane's invitation. Now Williams was paying too much attention to Peachy. Why that troubled him, Gifford couldn't guess. There was something about the man he didn't like. Didn't want Peachy near him.

"There is no reason for anyone to frighten anyone else." The voice was Jeff Stern's. He stood in the door, an apron tied around his waist. "Bart brought the tree in because he's been watching for some sign of the blight here. It's missed us so far. It's coming, and there's no use taking the thing lightly. There's one thing we can't escape and we want to know when it will come."

He didn't say *death*. They all knew it. Still, he couldn't use the word.

Randy Williams grinned a little crookedly.

"Science will see us through," he said. "Why, I was in Canada last week. There are miles and miles of good timber left. This blight will leave before

it effects the whole world. Everything's going to come out all right."

He wheeled and faced Peachy Waters.

"Game for a swim?" he asked. "Things are too darned serious in here."

Peachy looked first at Bart, then at her father. She wasn't smiling. Then she shrugged her shoulders.

"Game for anything," she said.

Her voice sounded weary.

They went out together.

The rest of the group gathered around the table. Jane came close to Bart Gifford and linked her arm in his.

"How long now?"

Her hold tightened. Her fingers pinched his flesh. He should have been flattered, pleased. Somehow she left him cold and bewildered.

"I'm not sure. People are dying by the score in the cities. Starvation and lack of oxygen. It's better here. Williams is right about Canada. But to go there would only delay death that will come sooner or later. If you want to go?"

He looked around with brooding eyes.

"The government is permitting people to pass the border by thousands. I'd rather stay here. It's pleasant here, and familiar."

They all felt that way.

"Answer Jane's question," Lem Waters said. "You can answer it. We ain't afraid."

Gifford looked across the deep lake and at the heavy, green grass and evergreen border.

"Maybe two weeks," he said. "Small, isolated spots like this remain almost intact. Much of the world now it dead. Maybe a month, I don't know."

He shook his head.

They stared down at the dead sapling.

"Hell," Jeff Stern ripped off the

apron, "let's go swimming."

After that, Gifford spent his time wandering around the lake, and penetrating the jungle-like growth of the swamp. Five square miles of life, he thought. Five square miles of earth as yet intact.

The fourth day passed.

DORA STERN met him when he came in from the swamp. Dora was almost sixty, a hardened, supple woman who saw much and spoke little. Her eyes were moist as he came into the coolness of the porch.

"Bart," she said, "I want to talk with you."

They walked down to the lake and sat on the wharf.

"Bart," she said, "what are we going to do about Peachy?"

Peachy? What was wrong with her?

"I don't think I understand," he said.

"I mean Peachy and the Williams fellow. He's with her all the time. He asked her to run away."

Suddenly he was tense, angry.

"How do you know that?"

She smiled sadly.

"I'm an old woman. I see a lot of things, and maybe I shouldn't snoop around so. They were by the boat house. I heard them talking."

"Is Peachy going?"

"I—I think so. Williams said we're all crazy. He told Peachy that Canada is safe. I don't think *she's* safe *anywhere* with him."

He worried about her all afternoon. They went swimming, Randy Williams, Peachy, Jane and himself. It was sunset and across the lake, he could see the small patches of brown as they seemed to creep down to the water and stop. Small patches of death—pock

marks on the forest.

Jane stayed close to him. They sat on the raft, watching Peachy and Randy Williams swimming out into the lake beyond the raft.

"Bart," Jane's arm was around his shoulder. "Bart, I'm sorry about last summer."

It startled him.

"I'm not," he said a little stiffly. "It taught me something."

"I was a fool," she said. "I should have married you."

The sun was gone. He could hear Randy and Peachy calling to each other. They were too far out.

"I thought I loved you," he said. "You told me I didn't have a chance. You were mean as hell, Jane, if you know what I mean. You hurt me badly. After a while the hurt went away. I'm not getting into the same mess again."

"Peachy's cry came to him suddenly, a wild, frightened cry.

"Randy — Randy — I've — got — cramp."

Then a scream, and silence. He was on his feet. A half dozen long steps took him to the deep end of the wharf. Then he went in with a long graceful dive. He came up. He could hear splashing ahead of him and swam swiftly toward the sound. Then her call came again, closer. This time it made his heart cold and sent him ahead with renewed speed.

"Bart—please."

She had called him.

He was by her side then, and had one arm under her head. He started slowly, dragging her back toward the raft. Then she was on the raft and Randy Williams was bending over her. Peachy opened her eyes slowly.

"Bart—oh thank God, Bart."

Randy Williams moved away from her slowly, his eyes blazing. Bart

went to his knees at her side.

"Peachy—Peachy," he said, and his voice was choked.

Her arms went around his neck.

"Bart—you saved me. Jane—said—you . . ."

She fainted.

"JANE said you were going to marry her," Peachy said softly. Her arms were about him. Wrapped in the blue beach robe, she clung to him, her eyes wet and happy. "Jane was lying, wasn't she, Bart?"

He nodded, unable to speak. Wondering why he hadn't seen all this before. Peachy—running away with Williams—acting strangely toward him.

"I've loved you all along, Bart," she said simply. "I wanted to die. I thought I could go away with Randy—maybe forget. I couldn't stay, not after what Jane said."

He kissed her, and her lips clung to his.

"Jane lied," he said. He knew she believed it. He had never really loved Jane. It had all been over with since last year. Why had Jane lied? Revenge, because she didn't want him to go to Peachy? He suddenly hated Jane.

"Everything's all right now, Peachy. You're not going to run away?"

Her hair was wonderfully soft and warm against his cheek.

"Not ever," she said, and cuddled close to him. The words were no more than a whisper.

Another week. Nerves were beginning to break. The brown death crawled around the lake. The lawn was dead. The trees, even the hardiest of them, were touched at the top with brown. Brown, dead fingers, creeping down to suck away life.

Jeff Stern met Brad Gifford behind

the cabin. He carried a heavy pistol.

"Look, Brad," he said. His face was stony. His eyes were cold as ice. Dora is sick. Her nerves won't take it. Brad, would it be murder to release the person you love from lingering death? Brad, I'm a good man. I don't want to see Dora suffer."

"You can't do that." Brad Gifford wondered if he was right. Who was he to judge mercy killings? Could he make rules? Why the hell did they bother him? He and Peachy were happy. In this last week, he and Peachy were very close. They were crowding a lifetime into a week—maybe into a month. Why had Jeff come to him?

"You can't do it," he said.

"Why?" Jeff Stern was pleading his case. He had to seek advice. He couldn't do it alone, without someone's approval. Someone had to understand.

"You just can't." Gifford was stubborn.

Jeff Stern put the pistol into his pocket and wandered away. His eyes were dull and unhappy. Dora was lying in the little room at the head of the stairs, her face a pale death mask. She couldn't live long. Her life had been full.

Why did she have to suffer to the end?

Jeff Stern wasn't sure why.

"*You can't do it.*"

"*Why?*"

JANE STERN avoided Gifford. Her eyes avoided his when they met. She didn't dare speak to him. Gifford had little pity for her now. She had nearly murdered Peachy. Murdered her with unkind words.

Jane went to Randy Williams for comfort. Randy didn't leave the lake. He drove a few miles, and turned back. He shuddered when he thought of that strange, dead world he had started

to drive back to. No one on the highway. No living, green things. No people. Most of them had run in panic. Gone to Canada.

It was still green in Canada. For how long?

He went swimming with Jane, but the water was warm and it smelled of dead stuff that floated up from the bottom. Even the underwater plants were dying.

He sat with Jane, trying to derive some comfort from her company. They spoke little. Randy Williams' nerve was about broken, but before he died, he thought, he had one last duty.

If Peachy Waters had gone to Canada with him, he might have escaped.

He might have escaped.

The words kept nagging at him and gradually he placed the blame on Bart Gifford. Gifford had taken Peachy away from him.

He would take something away from Gifford. Take away the person Gifford loved most.

Randy Williams found the pistol on the table in the dining room. Jeff Stern had dropped it there. Listlessly, he had left the weapon in plain sight and wandered upstairs to sit near Dora.

The food was gone. Nothing was left in the garden now, and only a few cans of vegetables were left in the kitchen. A few starved, bony chickens moved listlessly around the chicken yard.

"Maybe a day or two," Gifford said, and he hated to say it for he was pronouncing Peachy's death sentence. Peachy was pale now, but still very beautiful as she sat in the firelight, gazing up at him, worshipping him for his courage and his decency.

They left each other at midnight. Gifford went to bed, but the air was bad. He couldn't sleep. He wondered, what will kill us first? Will it be the

poison that rushes in and sucks away our breath? Will it be the heat? Will we starve? Maybe he should have said yes to Jeff Stern. Jeff was right. Dora should be killed—peacefully. She shouldn't be forced to suffer.

He gasped for breath, smelling the dry, dead odor of the vegetation outside the open window.

A step sounded in the hall. It came from the direction of Peachy's room. Was she awake, frightened?

He slipped into his robe and went to the door. He entered the hall softly, so that he wouldn't disturb the others.

Randy Williams was standing before Peachy's door. He had a gun in his hand. Before Gifford could speak to him, Williams opened the door and went in quickly. Gifford started to run, hitting the door as it closed. Peachy was sitting up in bed, a blanket pulled about her, eyes wide with horror.

Williams pivoted, smiling grimly.

"Glad you came in, Bart," he said. "Just in time for the party."

His eyes were the eyes of a mad man.

Gifford stood still, legs braced, hoping against hope that Williams would shoot him and spare Peachy. Why, he thought? What difference? We'll all be dead soon.

Still, you didn't die willingly until your time came. You kept fighting, hoping.

"You haven't got the courage to fire that gun," he said. He was lying even to himself. Williams *did* have the courage, born of desperation.

"It doesn't take courage," Williams said. "Sure, I'm a coward, but I'm damned if you'll talk me out of doing the one thing I can get any pleasure out of."

He had time to pull the trigger, but Peachy was faster. She shot out of bed like a small tigress and was on his back, clawing and dragging him to the

floor. The slug tore into the ceiling as Bart Gifford sprang, hitting blindly, pounding Williams down until he lay limp and silent on the carpet. Gifford picked up the gun.

"I guess I better keep this."

Then he went to Peachy.

THEY gathered in Peachy Waters' room. Jenny and Lem Waters were angry. They wanted to kill Williams.

"He isn't worth it," Bart Gifford said. In a way he felt sorry for Williams. Sorry for the man whose courage had failed. Jane Stern sat on the floor, head bowed, holding Williams' head on her lap.

"Where's Jeff?" Lem Waters asked.
Where's Jeff?

Jeff Stern must have heard the shot.

"I'm going in and see Dora," Jenny Waters said.

Bart Gifford held her back gently.

"Better stay with Peachy," he said gently. "I—want to talk with Jeff alone."

In his heart he knew why Jeff hadn't heard the shot.

The old Westerner had taken the law into his own hands. He had made his own law, and he had lived by it.

Dora was dead. A pillow held tightly over her face had snuffed out her life. Jeff Stern was hanging in the bathroom.

He had tied a neat hangman's knot. He had probably tied many of them in his early days, when all men west of the Mississippi made their own laws.

He left a note. It was short.

"Sorry, Bart," Bart Gifford read it with misty eyes. *"This time I've made up my mind. There ain't gonna be no more suffering for Dora. Take care of Jane."*

Take care of Jane. Gifford tried. He watched her when he could, but

Jane shut her door, and behind it nursed Randy Williams. He was better. At least he rested. The wounds didn't heal. The oxygen was bad. The food was worse. Gradually he went mad, and raved about his love for Peachy and his hatred for Bart Gifford. Jane Stern, unloved, needing love, cared for him.

"It's the last day," Gifford said. "Peachy, you and I have to stick together. No fooling each other and no weakening. Your mother died because she wanted to die. Lem wasn't a coward. When your mother died, Lem chose the lake. He loved that lake. He and your mother lived near it all their life. You can't blame Lem for drowning himself, Peachy. It wasn't the act of a coward. It took courage."

Peachy took it well. She watched Bart as he wrapped Jenny's thin body in a blanket and placed her in her grave. There were three graves now. Jenny Waters and Jeff and Dora Stern. The lake had held Lem's body locked beneath its surface. It wouldn't give up its dead.

Upstairs, without food, without hope, Jane Stern watched over Randy Williams.

PEACHY WATERS had grown to womanhood in three weeks. Her childhood was gone. She was thin but the thinness gave her dignity. Her pale cheeks were the cheeks of a woman who faced death with courage, and lived for the love and faith of a man.

She stood on the porch, staring out at the lake, and at the forest beyond.

"Bart," she said, "there's no more green. None at all."

He smiled sadly. He had been careful to shave and to dress neatly. That was a sign of good morale, he told himself. He noticed that Peachy had done the same. Her hair was done carefully.

Her dress was colorful and starched neatly. She was like an angel, calm and waiting.

"Maybe there is a little green somewhere," he said. "It's hard to say. We might find a little. I'd like to see it. I'm starved for a bit of green."

The room upstairs was silent. Jane Stern had never left Randy Williams. She had never come out of the room. No food had gone up for two days. There was no food for Gifford to take to her.

The room was like a tomb, closed and silent, and the door could never open again, for there would be no one left to open it.

"I'd like—to walk," Peachy said.

She panted a little, for it was hot and there was nothing to absorb the heat of the sun. The earth was scorched and dusty. The lake was very low. Fish floated, stomachs up, on the surface. Crabs lay dry and dehydrated along the shore.

Gifford still wondered at the air he breathed. There was a little oxygen left. Very little that the lungs could use.

He talked only in short sentences. He had to think about breathing or he might forget about it. If he forgot, the poor, shrunken lungs wouldn't work again.

"We'll—walk," he said.

He took Peachy's fragile hand and they went slowly across the lawn.

He put his hat on Peachy's head to protect her. Her hair, still golden, puffed out under the hat, and he laughed at her.

"You look foolish in that thing," he said.

She laughed a little too, for their minds had ceased to worry about the past. Those dead were forgotten. They might have been the last two people alive on earth. They felt aloof and

light headed— Completely alone.

How many more remain, Gifford wondered, as they walked slowly along the lake? How many have managed, as we have, to live for the last day?

The forest was a forgotten place of gray and brown. No wild thing moved among the trees.

They walked for a while without speaking. Then he heard Peachy cry out. It was a surprised, glad cry. She ran into the mass of dried underbrush and fell to her knees. Gifford followed and kneeled at her side.

Suddenly a vague, wild hope gripped him.

"Peachy," he said. "*Peachy, maybe—it's a sign.*"

She was crying. Crying gladly, as though all her misery was washed away and she was glad again.

Before her, fighting their way out of the brown grass, were two tiny roses. They were sprouting from the seemingly dead stem of a wild rose bush. From the faint green of the stem, two pink roses blossomed. Their color was faded. The rosebush had fought a mighty battle to live.

PEACHY gathered the blooms in her hand without breaking them from the stem. She bent forward and buried her lips in their fragrance.

From the West, a faint, fresh wind started to blow. It carried life-giving oxygen into the valley, rippling the water of the lake, touching the dried limbs of the trees and making them move in the breeze.

The wind was wet. It brought a promise of life.

"Perhaps," Bart Gifford said in a low, reverent voice, "Mother Nature isn't going to die. Perhaps she, with all her power, has felt the healing touch and will revive."

They stayed there for a long time,

side by side, watching the two roses with wide, hopeful eyes. Bart Gifford saw the courage and the faith written on Peachy's face.

"She's an angel," he thought. "She's too good to die."

They slept, then, and the two roses felt the touch of dew for the first time in weeks. A few grass blades straightened and started to live. The forest was beginning to feel the touch of a healing hand.

THE PROBLEMS OF GEOLOGY

By

L. TAYLOR HANSEN

No. 1



IN ORDER to understand man, we have to understand the earth upon which man lives, for he is a child of the soil. The great mass migrations of history, and probably pre-history, have been caused by some disturbance such as floods or droughts. Thus man depends on the soil, and when the soil fails, man is driven over the mountains, as it were, to seek new lands for himself and his animals.

In a larger sense, none of the earth sciences can be divorced from the study of the earth. The plants and the animals are just as dependent upon the soil as man himself, yet this science upon which the others must find their roots is itself in a turmoil of debate. Were continents and oceans always where science found them a few short centuries ago? (I am not speaking of shelf-seas, such as The Hudson Bay or The Baltic, but of true oceans such as the Indian, Atlantic, Arctic and Pacific.) Our fathers and grandfathers thought so.* They explained mountain ranges as wrinkles upon the shrinking skin of a drying apple.** They did not attempt to explain the patterns which these ranges form. They did not know about the oceanic contours. In fact, geologists had not yet become intimate with the problems which harass them today. Nor, as if they did not have enough of their own, were they driven then as now to attempt to explain the mysteries

of plant and animal distribution. In the times of our fathers and grandfathers, all men took it for granted that the earth was cooling off. Today we are not even too certain of this apparent fact. Joly, the great English geophysicist, pointed out that radium and similar metals would have a tendency to heat rocks through long ages of time, until a melting of the thin crust, which is only some ten to thirty miles thick, would bring relief to the superheated sea of lava upon which we float.

Today, in order to meet these problems, geologists seem to have formed themselves into three groups. Or, as Prouty more aptly says, "Geologists, like Gaul, can be divided into three parts: those who believe in the fixity of continents and oceans; those who build bridges, and those who believe in some kind of continental displacement."

Those who believe in the fixity of continents and oceans are the conservatives. They have no explanations for the enigmas of geology. Those who build bridges, like Charles Schuchert, do explain the distribution of plants and animals, although they do not explain the distribution of ancient climates. Those who favor some form of continental displacement, explain the enigmas of life distribution and of ancient climates, although they sometimes get entangled in other difficulties. Most conservative geologists identify continental displacement with Wegener, one of its early advocates whose hypothesis, demanding certain sequences of events, has been exploded. However, science has a way of advancing over the stepping stones of exploded hypotheses. Or perhaps, the truth embedded therein, which gave them life in the first place, in time reasserts, and returns to haunt the minds of other students.

About 1938, some ten years after the Wegener Hypothesis was exploded, the present writer became haunted by the truth which lingered in the broken hypothesis. Travels through the western United States reinforced the fact that recent pressures were coming from the north and north east. Observation also disclosed the recent nature of many lava flows. For example, Crater Lake, long thought to have been extinct for perhaps a million years, now is known to have exploded in the time

*Chamberlin may be considered the type of geologist who believed in the stability of continents and oceans. Charles Schuchert, the great American authority who arrived at the pinnacle of his profession without the benefit of a college degree, was one of the foremost advocates of land-bridges between continental masses in order to account for the migrations of plants and animals. The recent death of this master of historical geology has been a profound loss to science. Dr. Reginald Daly of Harvard is one of the leading exponents of some type of continental displacement.

**Lambert, quoted by Wegener, dealt the shrinkage theory a great blow when he found that the total shrinkage from early to recent times was unable to account for the Alpine-Himalaya Cordillera alone.

of man. Indian legend has given it the name of "Maza ma," "The Fire Dragon," which we now know as apt since the University of Oregon has unearthed articles of human manufacture in the ancient lake covered by its ashes. The present writer had the privilege of seeing a pair of moccasins encased in lava which were taken from a Mazama flow, and are now held in a private collection in Portland. Glass Mountain in Northern California probably built up its crater within the past five hundred years. Hans Stille, the German geophysicist, estimated that over half the lava flow in the western states originated during and since the ice age. The present writer has noted very young flows (five hundred years or less) from Idaho's Craters of the Moon to the still boiling crater of Coso (The Flama God) in Inyo County, southeast of Death Valley. Incidentally, it is an awe inspiring experience to stand at the edge of this crater or in one of the many steam caves which surround it at the base of its cliffs, when the army planes are dropping test bombs in a nearby desert. The earth trembles slightly from the distant impact and then from beneath one's feet come the first low growls, while jets of steam hiss upward. Usually the reaction is not immediate. Sometimes there is a twelve hour lag. But the reaction always comes. And it raises the hairs on one's head.

SURROUNDING Coso are lava mountains which are subject to constant slides, as if their ropy material was being stuffed off, from the inside. How fast they are moving could only be determined by surveys taken at regular intervals. This definitely should be done. Farther up the valley, a company drilling for minerals, lost their instruments at 200 feet as if the entire valley existed on a thin crust, much thinner than the rest of the continent.

What is this connection between these forces which are moving our thin-skinned crust of continental rocks, and the many enigmas of geology? If you are one of those who enjoys his science straight, delighting in the as yet unsolved past of our planet, here are the facts of our problem. And let us remember while we are wrestling with the problem of the crust long before the time of man, that our destiny in the milleniums to come is bound up with this earth-crust, which, recent surveys tell us (when compared to those of a century ago) is writhing beneath our feet like a living thing. The only reason that we do not notice the movements is that we live such brief gnat-like lives.

First let us take up the enigma of climatic distribution. How did it happen that during the Carboniferous (time of the dinosaurs) the eastern part of the United States, Greenland and England lay within the hot tropical rain forest, while at the same time, such lands as India, Australia, Africa and part of South America were glaciated? If your explanation is that the earth swung

around in her orbit, then why is Antarctica still glaciated from that same Carboniferous-Permian glaciation while then-tropical England has since been glaciated many times in a more recent northern glacial?

As a second part of our problem, let us glance at animal distribution. To take only one example, because it has been one which has caused much discussion, let us take up the great flightless birds. Wegener used this as an argument and the ornithologists came forth with a withering rejoinder. Wegener noted that they were distributed in all of the southern continents and many of the southern islands. The men who specialize in birds then announced that the great flightless birds did not belong to the same genus and of course their distribution proved nothing. However, since the German Wegener lost his life while trying to measure the drift of Greenland from its eastern continental neighbors, the parasitologists have become interested in the problem of the great flightless birds. In this question they have negated the ornithologists by showing that the great flightless birds of the islands and continents of the southern continents have the same parasites. Since these are not shared by other birds, the answer must be that the great flightless birds are indeed most closely related. Furthermore, they have also found that one genus of frogs carrying the same opalid parasites (worms) are to be found both in South America and in Kerguelin Island in the Indian Ocean, but not in any of the northern continents. Since the nearest continental neighbor of Kerguelin is Antarctica, the inference that this land was the migration route when it knew a less rigorous climate, is an obvious one. Kerguelin is itself an enigma, being composed of continental rocks, and taking its rise from a submarine shelf which is often only four hundred feet in depth.

Fresh water fish, earthworms, ants and other insects as well as reptiles and mammals all have their own distribution problems. Behind these problems, giving a splendid check is the parasitologist. For although eggs may be borne on a water soaked drifting branch, they can not carry along the parasite.

WE ENTER another field in the distribution of plants. They, too, seem to lend us certain factual evidence. For example, the fringe of islands running from Japan to lower California carry an old related flora. And once more the parasitologist bears his additional light to the problem. Seeds may float but they can not carry rust or certain insect borne diseases. In this field we have the evidence of a great invasion of Europe by the trees of the American forests during the Miocene. This invasion occurred on a wide front as Agassiz pointed out. In the face of this evidence are we justified in assuming a wide Atlantic Ocean during that period of earth history? Similarly, there was a very early separation for

the South Sea Islands. Incidentally, the tops of this submarine mountain range carry some of the most ancient floras on the face of the planet. Dr. Camp of the New York Botanical Gardens who has done some splendid research on these and other hotanical problems, and who believes that some kind of continental displacement will prevail in the geology of the future, complains in a letter to the present writer that the geologists in their rounds of arguments are doing little to help the hotanical picture, but instead, "like Omar the tentmaker, evermore go out by the same door wherein they came."

The greatest question marks of all, however, are the physical features of the planet, which it is the business of geologists to study. Why was the warm Tethys Sea, which circled the earth during the Mesozoic, crumpled and pushed up so high that its shell-marked sands form the top of Everest—the highest mountain on our globe? What causes the giant rift valleys, the pattern of mountain ranges and the contour of ocean hot-toms? Why does the Pacific differ so from the other oceans?

These are some of the problems which geology faces today and which the old theory of shrinkage cannot entirely explain. Our world differs from the world of our grandfathers because we know more about it and the knowledge has brought its own question marks. In contrast to the ideas of our grandfathers which explained their world after a fashion, what theories can we bring to explain our much more complex and yet more unified

world-patterns?

In my next Article I shall try to cover the main theories; what criticisms and inability to explain facts exploded them; and what we may salvage from their fragments. Perhaps by discarding those fragments which vary from the facts, and saving those which meet the facts, we may form a combined theory which will again carry forward the battle for continental displacement. For, as Dr. Daly of Harvard, Dr. Smith of Oregon and Dr. Clements of U.S.C. (as well as many others) in recent letters or statements to the present writer agree, some type of this now revolutionary hypothesis will probably become the geology of the future.

REFERENCES

- This Mobile Earth*, by Reginald Daly.
Origin of Folded Mountains, by W. E. Prouty, Smithsonian, No. 3270, 1933.
Animals on the March. Reed and Lucas. Harcourt Brace, 1937.
The Bell Toad and Opalind Parasites. M. M. Metcalf, Amer. Naturalist 62.
Animal Distribution and Ancient Routes. M. M. Metcalf, U. of Buffalo, Vol. 57.
Geological Sketches, by Louis Agassiz (now out of print).
Surface History of the Earth, by John Joly, London, 1925.
Some Mechanical Curiosities Connected with the Earth's Field of Force, by W. D. Lambert in *American Journal of Science*, 1921.

WAS THE SINKING OF ATLANTIS POSSIBLE?

ALL the continents which now exist were once under water, and the rocks of which they are composed were deposited under the water. Most of these rocks were the washings of other continents which then stood where the oceans now roll. Their mountains and plains were ground down by the action of volcanoes and earthquakes; and frost, ice, wind, and rain, and washed into the sea to form the rocks on which the nations now dwell. That which is now continent was once sea and that which is now sea was formerly continent. The Australian Archipelago is simply mountain-tops of a drowned continent which once reached from India to South America. Science has given it the name of "Lemuria," and it is claimed the human race originated here. An examination of the geological formation of our Atlantic states proves from the manner in which the sedimentary rocks, the sand, gravel, and mud are deposited, that they came from the north and east. They represent the detritus of pre-existing lands. It is reasonable to believe that the land masses of continental magnitude must have occupied the region now covered by the North Atlantic. These areas of land must have been large. It could scarcely have been of

less extent than the strata it formed. The proof of this fact is that the great strata of rocks are thicker the nearer we approach their source in the east. The rougher and coarser textured rocks predominate in the east, while the farther west you go the finer grained rocks will be found. The finer materials were carried farther west by the water.

As the great continent which stood where the Atlantic Ocean now is wore away, the continents of America and Europe were formed. There seems to be a continuous rising of new lands and a sinking of the old ones. Within five thousand years the shores of Sweden, Denmark, and Norway have risen from 200 to 600 feet. There is evidence that at one time the area of Great Britain was submerged to the depth of at least seventeen hundred feet. Sicily once lay beneath the sea: it rose three thousand feet above the sea-level. The Sahara desert was once under water, its hot sands being a deposit of the sea.

The submergence of Atlantis was the last of a number of great changes by which the continent which once occupied the Atlantic gradually sunk into the ocean.

Lucas C. Wellington



Several of the monsters mangled down under the ray



THE STAR KINGS



(Continued from page 43)

world should I betray the Empire?"

"You're my second son," Arn Abbas reminded grimly. "You may have secretly envied Jhal the succession, all the time you pretended to be absorbed in your scientific studies. Such things have happened!"

If his position had seemed nightmare to John Gordon before, it seemed doubly nightmare now.

"This thing is going to be sifted to the bottom!" roared Arn Abbas. "In the meantime, you'll remain locked up in the palace prison!"

Jhal Arn protested. "You can't send Zarth down there!"

Commander Corbulo supported the protest. "At least for appearance's sake, confine Prince Zarth to his own quarters."

Arn Abbas glared at them. "Have you two lost your wits? Don't you realize that if Zarth is a traitor, he represents mortal danger to the Empire?"

"He knew the secret of the Disruptor, that only Jhal and I beside him know! Let Shorr Kan get that secret, and the Cloud will strike like lightning! Do you want to take a chance of that?"

"But the wedding tomorrow, the guests—," Jhal began.

"Announce that Prince Zarth was suddenly taken ill," snapped the ruler. "Corbulo, you take him down to the prison. And you're responsible for him with your life!"

Gordon's thoughts were whirling wildly. Suppose he told them the truth, the *real* truth? Suppose he told them that he didn't even know the secret of the Disruptor, that he was only Zarth Arn in physical body and was really John Gordon of the 20th Century? Surely Zarth Arn couldn't blame him for breaking his pledge of secrecy *now*?

BUT would they believe if he told? He knew that they wouldn't. No one would believe that incredible story. Zarth Arn had kept his method of mind-exchange

secret, and no one even dreamed of its possibility. They'd think he was merely trying a desperate, wild lie to save himself.

Gordon's shoulders sagged. He made no further protest but dully went with Commander Corbulo out of the room.

On the corridor motowalk that bore them downward to the lower levels of the palace, Corbulo spoke to him bluntly.

"Zarth, I don't believe a word of all this talk of treachery on your part. I have to lock you up, but you can depend on me to do everything I can to clear you."

The unexpected support from the veteran officer pulled Gordon a little out of his stunned despair.

"Corbulo, I swear the whole thing is some kind of frame-up! Surely my father can't believe I'd really betray the Empire?"

"You know as well as I what a violent temper Arn Abbas has," said the Commander. "But as soon as he cools off, I'll make him listen to reason."

Deep down beneath the great palace they came to a massive metal door. Corbulo flashed a tiny beam from a heavy ring on his finger, into a needle-hole in the door. It slid aside and revealed a square, bare little metal room.

"This is a cell of your father's secret prison, Zarth. I never thought I'd be locking you in here. But don't worry—we'll do our best to change Arn Abbas' mind."

Gordon gripped his hand gratefully, and entered the room. The massive door slid shut.

The room had only a cot with a thin pad for furniture. There were two taps in the wall, one for water and the other for nutritional fluid. Walls, floor and ceiling were of solid metal.

Gordon sat down heavily. At first, he felt a little cheered by Corbulo's assurance of support. But then his hope faded. Even if Corbulo and Jhal Arn believed in him, how could they prove his innocence?

And, the thought forced into his mind,

what if he really *was* guilty of treachery? What if Zarth Arn, the real Zarth Arn, had in the past been intriguing with Shorr Kan?

Gordon shook his head. "No, I can't believe that! Zarth Arn was a scientific enthusiast, not a schemer. And if he'd been plotting with the Cloud, he'd not have exchanged minds with me."

But if Zarth Arn had been innocent of intrigue, why had Shorr Kan sent him that message referring to their past discussions?

Gordon gave it up. "I'm just out of my depth. I should have known that my ignorance would get me into some disaster if I tried to play Zarth's part!"

He thought miserably of Lianna. They'd have to tell her what had happened, even if they kept it concealed from everyone else.

Would she too think him a traitor? That possibility stung Gordon to despair.

He was for a time in a fever of self-torment, but finally a despairing apathy succeeded it. After hours, he slept.

Gordon estimated it was evening of the next day when he awoke. The door opening had aroused him. He stood up, and then stared incredulously at the two figures entering.

One was Corbulo's stocky form. But the other, the slimmer figure in dark jacket and slacks—

"Lianna!" Gordon exclaimed. "What are you doing down here?"

SHE came toward him, her face pale but her gray eyes alight as she put her small hands on his shoulders. Her words came in a rush.

"Zarth, they told me all about your father's accusation. Arn Abbas must be mad!"

His eyes hungrily searched her face. "You don't believe I'm a traitor, Lianna?"

"I *know* you are not!" she exclaimed. "I told Arn Abbas so, but he was too angry to listen to me."

Gordon felt a wave of sharp emotion. "Lianna, I think it was what you might believe that tortured me most!"

Corbulo came forward, his grizzled face-

grave. "You must talk quickly, princess! We must be out of here with Zarth Arn in twenty minutes, to keep my schedule."

"Out of here with *me*?" Gordon repeated. "You mean you're going to let me leave here?"

Corbulo nodded curtly. "Yes, Zarth, I made up my mind and told the princess this evening. I'm going to help you escape from Throon."

Gordon warmed to his hard-faced Commander. "Corbulo, I appreciate your faith in me. But it would look like running away."

"Zarth, you *have* to go!" Corbulo told him earnestly. "I thought I could bring your father around. But unfortunately, in your apartments were discovered other incriminating messages to you from Shorr Kan!"

Gordon was stupefied. "Then they're fakes, planted there on purpose to incriminate me!"

"I believe that, but they've deepened your father's raging belief in your guilt," Corbulo declared. "I fear that in his present anger, he may order you executed as a traitor!"

The Commander added, "I'm not going to let him do that and then regret it later when you're proved innocent. So you must get away from Throon until I *can* prove your innocence!"

Lianna added eagerly, "We have it all planned, Zarth. Corbulo has a light naval cruiser with trusted officers waiting at the spaceport. That ship will take us up to my Fomalhaut Kingdom. We'll be safe there until Corbulo and your brother can prove you're not guilty."

Gordon was more deeply astonished. "You say—*we*? Lianna, you'd go with me, a fugitive? Why?"

For answer, firm, warm arms went around his neck and soft lips pressed his in quivering, sweet contact.

Her voice was a husky whisper. "That is why, Zarth."

Gordon's mind whirled. "You mean that you love me? Lianna, is it true?"

"I have, since the night of the Feast of Moons when you kissed me," she whis-

pered. "Until then, I had liked you but that was all. But since then, you've been somehow different."

Gordon's arms tightened around her. "Then it's the different Zarth Arn, the new Zarth Arn, you love?"

She looked up at him steadily. "I have just told you so."

There deep in the secret prison beneath the great palace of Throon, Gordon felt a wild, soaring joy that blotted from his mind all consciousness of the deadly web of peril and intrigue in which he was caught.

It was he himself, even though in a stranger's physical body, who had won Lianna's love! Though she might never know it, it was not Zarth Arn she loved but John Gordon!

CHAPTER X

Flight into the Void

THE secret of his identity trembled on Gordon's lips. He wanted with all his soul to tell Lianna that he was Zarth Arn only in physical body, that he was really John Gordon of the past.

He couldn't do it, he had to keep his pledge to Zarth Arn. And after all, what good would it do to tell her when he had to leave her eventually and go back to his own time?

Could any self-devised torment be more damnable? To be forced to separate himself by half a universe and two thousand centuries of time from the only girl he had ever really loved?

Gordon spoke huskily. "Lianna, you must not go with me. It's too dangerous."

She looked up quickly with brilliant eyes. "Does a daughter of star-kings fear danger? No, Zarth, we go together!"

She added, "Don't you see, your father won't be able to send after you by force when you're with me in my little Fomalhaut kingdom. The Empire needs allies too much to estrange my people thus."

Gordon's mind raced. Here might be his chance to get to Earth! Once away from Throon, he might by some pretext get Corbulo's men to take them first to

Earth and the laboratory there.

There, he could manage to re-effect the mind-exchange with the real Zarth Arn without letting Lianna know what he was doing. And the real Zarth, on returning, could surely prove his innocence.

Corbul interrupted by coming up to them. His hard face was deeply worried.

"We cannot wait longer here! The corridors will be clear now, and it is our only chance to go."

Disregarding Gordon's protests against her accompanying him, Lianna seized his wrist and tugged him forward.

Corbulo had opened the massive sliding door. The corridors outside were softly lighted, silent, deserted.

"We go to a little-used branch of the tubeway," Corbulo told them hastily. "One of my most trusted officers is waiting there."

They hurried along the corridors, deep beneath the mighty palace of Throon. Not a sound came from the mammoth structure over their heads. These secret passages were soundproofed.

Nor did they meet anyone. But as they emerged into a wider corridor, Corbulo led the way with caution. Finally they stepped into a small room that was a vestibule to one of the tubeways. A car was waiting in the tube, and a man in naval uniform waited beside it.

"This is Thern Eldred, captain of the cruiser that will take you to Fomalhaut Kingdom," Corbulo said quickly. "You can trust him absolutely."

Thern Eldred was a tall Sirian, the faintly greenish hue of his face gave evidence. He looked a hard-bitten, rangy veteran of space, but his curt face lighted as he bowed deeply to Gordon and Lianna.

"Prince Zarth, Princess—I am honored by this trust! The Commander has explained everything to me. You can rely on me and my men to get you to any part of the galaxy!"

Gordon hesitated, troubled. "It still seems like running away."

Corbulo swore a spaceman's oath. "Zarth, it's your only chance! With you gone, I'll have time to dig out evidence of your inno-

cence and bring your father around. Stay here, and he's likely to have you shot as a traitor."

Gordon might have stayed despite that danger had it not been for the potent factor which was wholly unknown to these others—the fact that this was his only chance to get to Earth and make contact with the real Zarth Arn.

He gripped Corbulo's hand. And Lianna softly told the bluff Commander, "You're risking much for us. I shall never forget."

They stepped into the car. Thern Eldred hastily followed them in and touched a lever. The car started racing headlong through the darkness.

TERN ELDERED glanced tensely at his watch. "Everything has been scheduled to the minute, highness," he told Gordon. "My cruiser, the *Markab*, is waiting in a secluded dock at the spaceport. Obviously we take off to join the Sagittarius patrol."

"You're risking your neck for us too, captain," Gordon said earnestly.

The Sirian smiled. "Commander Corbulo has been like a father to me. I could not refuse the trust when he asked me and my men."

The car slowed and halted beside another little vestibule in which two naval officers armed with atom-pistols were waiting.

They saluted sharply as Gordon and Lianna stepped out. Thern Eldred quickly followed and led the way up a gliding ramp.

"Now muffle your cloaks about your faces until we get aboard the *Markab*," he told them. "After that, you need fear nothing."

They emerged onto a corner of the spaceport. It was night, two golden moons strung across the blazing starry sky, casting down a warm light in which the massive ships, cranes and machines glinted dully.

Towering from the docks, dwarfing all else, loomed the black bulks of the mighty first-line battleships. As they followed Thern Eldred along the side of one, Gordon glimpsed the portentous muzzles of its heavy atom-gun batteries silhouetted

against the stars.

The Sirian made a signal and held them suddenly back, as a troop of noisy sailors swaggered past. Standing there in the dark, Gordon felt the pressure of Lianna's fingers on his hand. Her face, in the dim light, smiled at him undauntedly.

Then Thern Eldred motioned them on. "We must hurry!" he sweated. "We're behind schedule—"

The black, fishlike mass of the *Markab* rose before them in the golden moonlight. Lights glittered from small portholes, and there was a steady throbbing of power from the stern of the light cruiser.

They followed the Sirian and his two officers up a narrow gangway toward a waiting open door in the side of the ship. But suddenly, the silence was violently broken.

Annunciators about the spaceport screamed a loud siren alarm. Then a man's hoarse, excited voice shouted from the speakers.

"General alarm to all naval personnel!" yelled that wild voice. "*Arn Abbas has just been assassinated!*"

Gordon froze, wildly clutching Lianna's hand as they stopped there on the gangway.

The voice was shouting on. "Apprehend Prince Zarth Arn wherever he is encountered! He is to be arrested immediately!"

"Good God!" cried Gordon. "Arn Abbas murdered—and they think *I* escaped and did it!"

The whole great spaceport was waking to the alarm, the voice shouting its wild message over and over from a hundred annunciators. Bells were ringing, men yelling and running.

Far southward, over the distant towers of the city Throon, gleaming fliers were rushing up in the night sky and racing wildly across the heavens in half a dozen different directions.

Thern Eldred tried to urge the frozen Gordon and Lianna up the gangway. "You must hurry, highness!" cried the Sirian. "Your only chance is to get away at once!"

"Run away and let them think I murdered Arn Abbas?" cried Gordon. "No!

"We're going back to the palace at once!"

Lianna, her face pale, swiftly supported him. "You must return. Arn Abbas' murder will shake the whole Empire!"

GORDON had turned with her to start back down the gangway. But Thern Eldred, his green face wearing a hard, taut expression, suddenly whipped out and extended a little glass weapon.

It was a short glass rod on whose end was mounted a glass crescent that had two metal tips. He darted it toward Gordon's face.

"Zarth, it's a paralyzer! Look out!" cried Lianna, who recognized the menace of the weapon where Gordon did not.*

The tips of the glass crescent touched Gordon's chin. Lightning seemed to crash through his brain with a paralyzing shock.

He felt himself falling, every muscle frozen, consciousness leaving him. He had a dim sensation of Lianna's voice, of her staggering against him.

There was only darkness in Gordon's mind then. In that darkness he seemed to float for ages before finally light began to dawn.

He became aware that his body was tingling painfully with returning life. He was lying on a hard, flat surface. There was a steady, loud droning sound in his ears.

Gordon painfully opened his eyes. He lay on a bunk in a little metal cabin, a tiny lighted room with little furniture.

Lianna, her face colorless and her eyes closed, lay in another bunk. There was a little porthole window from which he saw a sky of blazing stars. Then Gordon recognized the droning sound as the throb of a star-ship's powerful atomic turbines and drive-generators.

"Good God, we're in space!" he thought. "Thern Eldred stunned us and brought us—"

They were in the *Markab*, and from the

high drone of its drive the light cruiser was hurtling through the galactic void at its utmost speed.

Lianna was stirring. Gordon stumbled to his feet and went to her side. He chafed her wrists and face till her eyes opened.

The girl instantly became aware of their situation, with her first glance. Remembrance came back to her.

"Your father murdered!" she cried to Gordon. "And they think you did it, back at Throon!"

Gordon nodded sickly. "We've got to go back. We've got to make Thern Eldred take us back."

Gordon stumbled to the door of the cabin. It would not slide open when he tried it. They were locked in.

Lianna's voice turned him around. The girl was at the porthole, looking out. She turned a very pale face.

"Zarth, come here!"

He went to her side. Their cabin was near the bows of the cruiser, and the curve of the wall allowed them to look almost straight forward into the vault of stars into which the *Markab* was racing.

"They're not taking us toward Fomalhaut Kingdom!" Lianna exclaimed. "Thern Eldred has betrayed us!"

Gordon stared into the blazing jungle of stars that spread across the sky ahead.

"What's the meaning of this? Where is Thern Eldred taking us?" Gordon asked.

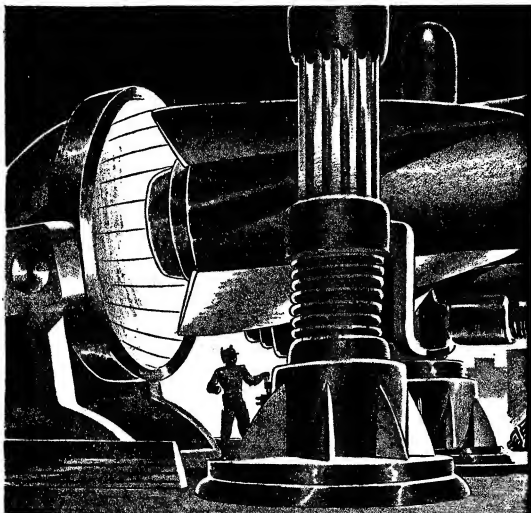
"Look to the west of Orion Nebula, in the distance ahead of us!" Lianna exclaimed.

Gordon looked as she pointed through the round window.* He saw, far away in the starry wilderness ahead of their racing ship, a black little blot in the heavens. A dark, brooding blotch that seemed to have devoured a section of the starry firmament.

He knew instantly what it was. The Cloud! The distant, mysterious realm of

* Note: A paralyzer was a weapon designed to stun an opponent when at close quarters. It did so by releasing a brief high-voltage electroshock that travelled through the nerves to the brain.

* Note. The "windows" of a star-ship were not simple windows, but vision-screens operating by sub-spectrum rays far faster than light. So that even when a ship was moving faster than the rays of light, these windows gave a true picture of surrounding space.



Thern Eldred, his green face wearing a hard, taut expression

semi-darkness within which lay the stars and planets of that League of the Dark Worlds of which Shorr Kan was master, and that was hatching war and conquest for the rest of the galaxy.

"They're taking us to the Cloud!" Lianna cried. "Zarth, this is Shorr Kan's plot!"

CHAPTER XI

Galactic Plot

THE truth flashed over Gordon's mind. All that had happened to him since he

had taken up the impersonation of Zarth Arn had been instigated by the cunning scheming of that master plotter who ruled the Cloud.

Shorr Kan's plots had reached out to involve him in the gathering conflict between the giant galactic confederations, through many secret agents. And one of those agents of the powerful master of the Dark Worlds must be Thern Eldred!

"By Heaven, I see it now!" Gordon exclaimed, to the stunned girl. "Thern Eldred is working for the Cloud, and has betrayed Commander Corbulo!"

"But why should they do this, Zarth?



suddenly whipped out and extended a little glass weapon.

Why implicate you in the murder of your own father?"

"To compromise me hopelessly so that I can't return to Throon!" gritted Gordon.

Lianna had paled slightly. She looked up at him steadily, though.

"What is going to happen to us in the Cloud, Zarth?" she asked.

Gordon felt an agony of apprehension for her. It was his fault that she was in this deadly danger. She had been trying to help him, and had incurred this peril.

"Lianna, I knew you shouldn't have come with me! If anything happens to you—"

He stopped and swung around, as the

door slid open. Thern Eldred stood there.

At sight of the tall Sirian standing and regarding them with a cynical smile on his pale green face, Gordon started forward in an access of hot rage.

Thern Eldred quickly drew one of the little glass weapons from his jacket.

"Please note this paralyzer in my hand," he advised dryly. "Unless you want to spend more time unconscious, you'll restrain yourself."

"You traitor!" raged Gordon. "You've betrayed your uniform, your Empire!"

Thern Eldred nodded calmly. "I've been one of Shorr Kan's most trusted agents for

years. I expect to receive his warmest commendations when we reach Thallarna."

"Thallarna? The mysterious capital of the League?" said Lianna. "Then we *are* going to the Cloud?"

The Sirian nodded again. "We'll reach it in four days. Luckily, knowing the patrol-schedules of the Empire fleet as I do, I am able to follow a course that will prevent unpleasant encounters."

"Then Arn Abbas was murdered by you League spies!" Gordon accused harshly. "You *knew* it was going to happen! That's why you were in such a hurry to get us away!"

The Sirian smiled coolly. "Of course. I was working on a schedule of split-seconds. It had to look as though you had murdered your father and then fled. We just pulled it off."

Gordon raged. "By heaven, you're not to the Cloud yet! Corbulo knows I didn't commit that murder! He'll put two and two together and be out to track you down!"

TERN ELDRED stared at him, then threw back his head in a roar of laughter. He laughed until he had to wipe his eyes.

"Your pardon, Prince Zarth, but that's the funniest thing you've said yet!" he chuckled. "Corbulo after me? Why, haven't you guessed yet that *Corbulo himself planned this whole thing?*"

"You're mad!" Gordon exclaimed. "Corbulo is the most trusted official in the Empire!"

Thern Eldred nodded. "Yes, but *only* an official, only Commander of the feet. And he has ambitions beyond that post, has had them a long time. For the last few years, he and a score of others of us officers have been working secretly for Shorr Kan."

The Sirian's eyes gleamed. "Shorr Kan has promised that when the Empire is shattered, we shall each of us have a star-kingdom of our own to rule. And Corbulo is to have the biggest."

Gordon's angry incredulity somehow faded a little, before the ring of truth in the Sirian's voice.

Horried, Gordon realized that it *might* be true! Chan Corbulo, Commander of the Empire's great navy, might be a secret traitor for all he knew.

Evidence pointing that way rose swiftly in Gordon's mind. Why else had Corbulo broken his duty and helped him to escape? Why, at the very moment when Arn Abbas' assassination was imminent?

Thern Eldred read something of what passed in Gordon's mind, from his face. And the Sirian laughed again.

"You begin to realize now what a dupe you've been. Why, it was Corbulo himself who shot down Arn Abbas last night! And Corbulo will swear that he saw it done by *you*, Zarth Arn!"

Lianna was pale, incredulous. "But why? Why implicate Zarth?"

"Because," smiled the Sirian, "it's the most effective way to split the Empire and leave it wide open to the Cloud's attack. And there's another reason that Shorr Kan will explain to you."

The malice and triumph in Thern Eldred's eyes detonated the rage that had gathered in John Gordon's mind.

He plunged forward, heedless of Thern Eldred's warning shout. He managed by a swift contortion of his body to avoid the glass paralyzer that the other jabbed at him. His fist smashed into the Sirian's face.

Thern Eldred, as he sprawled backward, had Gordon atop him like a leaping panther. But the Sirian had managed to cling to his weapon. And before Gordon could carry out his intention of wresting it away, Thern Eldred desperately jabbed up with it again.

The crescent at the end of the glass rod touched Gordon's neck. A freezing shock smote like lightning through his body. He felt his senses darken swiftly.

When Gordon for a second time came back to consciousness, he was again lying in one of the bunks. This time, the freezing ache in his body was more painful. And this time, Lianna was sitting beside him and looking down at him with anxious gray eyes.

Her eyes lighted as he opened his own.

"Zarth, you've been unconscious more than a day! I was beginning to worry."

"I'm—all right," he muttered. He tried to sit up, but her little hands quickly forced him back down onto the pad.

"Don't, Zarth—you must rest until your nerves recover from the electroshock."

He glanced at the porthole window. The vista of blazing stars outside seemed unchanged. He could glimpse the black blot of the Cloud, looking only a little larger in the distant forest of suns.

LIANNA followed his glance. "We are travelling at tremendous speed but it will still require a few days before we reach the Cloud. In that time, we may encounter an Empire patrol."

Gordon groaned. "Lianna, there's no hope for that. This is itself an Empire cruiser and could pass any patrol. And if Corbulo is really leader of this treachery, he'd have his patrols arranged so that this ship could pass unseen."

"I've thought and thought about it and I still can hardly believe it," Lianna said. "Corbulo a traitor! It seems fantastic! And yet—"

Gordon himself no longer doubted. The evidence was too overwhelming.

"Men will betray any trust when ambition drives them, and Corbulo is ambitious," he muttered. Then, as deeper realization came to him, "Good God, this means that if the League does attack the Empire, the Commander of the Empire forces will sabotage their defense!"

He rose painfully from the bunk despite Lianna's protestations.

"If we could only get word back to Throon somehow! That would at least put Jhal Arn on his guard!"

Lianna shook her ash-golden head a little sadly. "I fear there's no chance of that, once we're prisoners in the Cloud. Shorr Kan is not likely to let us go."

It all spun in John Gordon's mind in a bewildering chaos of known and unknown factors, in the hours that followed.

A few things, though, stood out clearly. They all, everyone in this universe, thought that he was Zarth Arn. And thus it was

believed that he knew the secret of the Disruptor, that mysterious scientific weapon known only to Arn Abbas and his two sons.

That was why Corbulo had risked the plot that was sending him and Lianna now as prisoners to the Cloud! Once Shorr Kan had that secret, mysterious weapon, he would have nothing to fear from the Empire whose fleet was commanded by his own man. He would attack them at once!

The *Markab* droned on and on. When the ship bells signalled evening of the arbitrary "day," the aspect of the starry firmament had changed. Orion Nebula flamed now in all its titan glory far in the east.

Straight ahead, far in the distance against the remotest suns of the galaxy, brooded the black blot of the Cloud. It was visibly larger than before, and its gigantic dimensions were now becoming more clearly apparent.

Neither Thern Eldred nor any of his officers or men entered the cabin. There was no opportunity for a second attack. And after searching vainly through the room, Gordon conceded defeatedly that there was nothing in it that might facilitate escape.

Sick anxiety for Lianna's safety deepened in him. He reproached himself again for letting her accompany him on this flight.

But she did not seem afraid as she looked up at him. "Zarth, at least we're together for a little while. It may be all of happiness we'll get."

Gordon found his arms instinctively starting to go around her, his hand touching her shining hair. But he forced himself to step back.

"Lianna, you'd better get some sleep," he said uncomfortably.

Lianna looked at him with a wondering little smile. "Why, Zarth, what's the matter?"

GORDON had never in his life wanted anything so much as to reach forth to her. But to do so would be the blackest treachery.

Treachery to Zarth Arn, who had trusted his body, his life, to Gordon's

pledge! Yes, and treachery to Lianna herself.

For if he were able to reach the Earth laboratory, it would be the real Zarth Arn who would come back to her—Zarth Arn, who loved Murn and not Lianna.

"That won't ever happen!" whispered a subtle, tempting voice in Gordon's mind. "You and she will never escape from the Cloud. Take what happiness you can, while you can!"

Gordon desperately fought down that insinuating voice. He spoke huskily to the puzzled girl.

"Lianna, you and I will have to forget all talk of love."

She seemed stricken by amazement, unbelief. "But Zarth, at Throon that morning you told me you loved me!"

Gordon nodded miserably. "I know. I wish to God I hadn't. It was wrong."

Little clouds began to gather in Lianna's gray eyes. She was white to the lips.

"You mean that you are still in love with Murn, after all?"

Gordon forced the answer to that out of strained, desperate resolve. He spoke what he knew was the exact truth.

"Zarth Arn does still love Murn. You have to know that, Lianna."

The incredulity in Lianna's white face gave way to a hurt that went deep in her gray eyes.

Gordon had expected stormy resentment, wrath, bitter reproach. He had steeled himself against them. But he had not expected this deep, voiceless hurt, and it was too much for him.

"To the devil with my promise!" he told himself fiercely. "Zarth Arn wouldn't hold me to it if he knew that situation—he couldn't!"

And Gordon stepped forward and grasped the girl's hand. "Lianna, I'm going to tell you the whole truth! Zarth Arn doesn't love you—but *I* do!"

He rushed on. "I'm not Zarth Arn. I'm an entirely different man, in Zarth Arn's body. I know it sounds incredible, but—"

His voice trailed off. For he read in Lianna's face her quick disbelief and scorn.

"Let us at least have no more lies,

Zarth!" she flared.

"I tell you, it's true!" he persisted. "This is Zarth Arn's physical body, yes. But I am a different man!"

He knew from the expression on her face that his attempt had failed. He knew that she did not believe and never would believe.

HOW could he expect her to believe it? If positions had been reversed, would he have credited such a wild assertion? He knew he wouldn't.

No one in this universe would credit it, now Vel Quen was dead. For only Vel Quen had known about Zarth Arn's fantastic experiments.

Lianna was looking at him, her eyes now calm and level and without a trace of emotion in her face.

"There is no need for you to explain your actions by wild stories of dual personality, Zarth. I understand clearly enough. You were simply doing what you conceived to be your duty to the Empire. You feared lest I might refuse the marriage at the last moment, so you pretended love for me to make sure of me and of Fomalhaut's support."

"Lianna, I swear it isn't so!" Gordon groaned. "But if you won't trust me to speak truth—"

She ignored his interruption. "You need not have done it, Zarth. I had no thought of refusing the marriage, since I knew how much depended on my kingdom supporting the Empire.

"But there's no further need for stratagems. I will keep my promise and so will my kingdom. I will marry you, but our marriage will be only a political formality as we first agreed."

John Gordon started to protest, then stopped. After all, the course she proposed was the only one he could take.

If the real Zarth Arn returned, his marriage with Lianna could not be anything more than political pretense.

"All right, Lianna," Gordon said heavily. "I repeat, that I never lied to you. But it all doesn't make much difference now, anyway."

He gestured, as he spoke, toward the porthole. Out there in the star-blazing void ahead of the rushing cruiser, the monster blot of the Cloud was looming ever bigger and closer.

Lianna nodded quietly. "We do not have much chance of escaping Shorr Kan's clutches. But if a chance does present itself, you will find me your ally. Our personal emotions mean little compared to the urgent necessity of getting back with a warning to the Empire."

Gordon saw less and less chance of that, in the hours that followed. For now the *Markab*, its velocity at great heights, was rushing ever nearer the Cloud.

That "night" when the ship lights dimmed, he lay in his bunk thinking bitterly that of all men in history he had had the most ironic joke played upon him.

The girl across the cabin loved him, and he loved her. And yet soon a gulf of space and time incredible might forever separate them, and she would always believe him faithless.

CHAPTER XII

In the Cosmic Cloud

NEXT "morning" they woke to find that the Cloud was colossal now ahead. Its vast blotch loomed across half the firmament, a roiling gloom that reached out angry, ragged arms of shadow like an octopus whose dark tentacles clutched at the whole galaxy.

And the *Markab* now was being companioned through space by four massive black battleships with the black disk of the League of Dark Worlds marked on their bows. They were so close, and maintained so exactly the same speed, they could be clearly seen.

"We might have known that Shorr Kan would send an escort," Lianna murmured. She glanced at Gordon. "He thinks that he has the secret of the Disruptor almost in his hands, in your person."

"Lianna, set your mind at rest on one thing," Gordon told her. "He'll never get that secret from me."

"I know you are not traitor to the Empire," she said somberly. "But the League scientists are said to be masters of strange tortures. They may force it from you."

Gordon laughed shortly. "They won't. Shorr Kan is going to find that he had made one bad miscalculation."

Nearer and nearer the five ships flew toward the Cloud. All the universe ahead was now a black, swirling gloom.

Then, keeping to their tight formation, the squadron plunged into the Cloud.

Darkness swept around the ship. Not a total darkness but a gloomy, shadowy haze that seemed smothering after the blazing glory of open space.

Gordon perceived that the cosmic dust that composed the Cloud was not as dense as he had thought. Its huge extent made it appear an impenetrable darkness from outside. But once inside it, they seemed racing through a vast, unbroken haze.

There were stars in here, stars that were visible only a few parsecs away. They shone wanly through the haze, like smothered bale-fires, uncanny witch-stars.

The *Markab* and its escort passed comparatively close to some of these star-systems. Gordon glimpsed planets circling in the feeble glow of the smothered suns, worlds shadowed by perpetual twilight.

Homing on secret radar beams, the ships plunged on and on through the Cloud. Yet it was not until next day that deceleration began.

"We must be pretty nearly there," Gordon said grimly to the girl.

Lianna nodded, and pointed ahead through the window. Far ahead in the shadowy haze burned a dull red, smoldering sun.

"Thallarna," she murmured. "The capital of the League of Dark Worlds, and the citadel of Shorr Kan."

Gordon's nerves stretched taut as the following hours of rapid deceleration brought them closer to their destination.

Meteor-hair rattled off the ships. They twisted and changed course frequently. The shrilling of meteor-alarms could be heard each few minutes, as jagged boulders rushed upon them and then vanished in

the automatic trip-blast of atomic energy from the ship.

Angry green luminescence that had once been called nebulum edged these stormy, denser regions. But each time they emerged into thinner haze, the sullen red sun of Thallarna glowed bigger ahead.

"The star-system of Thallarna was not idly chosen for their capital," Lianna said. "Invaders would have a perilous time threading through these stormy mazes to it."

GORDON felt the sinister aspect of the red sun as the ships swung toward it.

Old, smoldering, sullen crimson, it glowered here in the heart of the vast and gloomy Cloud like an evil, watching eye.

And the single planet that circled it, the planet Thallarna itself, was equally somber. Strange white plains and white forests of fungoid appearance covered much of it. An lanky ocean dashed its ebon waves, eerily reflecting the bloody light of the red sun.

The warships sank through the atmosphere toward a titan city. It was black and massive, its gigantic, block-like buildings gathered in harshly geometrical symmetry.

Lianna exclaimed and pointed to the huge rows of docks outside the city. Gordon's incredulous eyes beheld a vast beehive of activity, thousands of grim warships docked in long rows, a great activity of cranes and conveyors and men.

"Shorr Kan's fleet makes ready, indeed!" she said. "And this is only one of their naval bases here. The League is far stronger than we dreamed!"

Gordon fought a chilling apprehension. "But Jhal Arn will be calling together all the Empire's forces, too. And he has the Disruptor. If Corbulo can only be prevented from further treachery!"

The ships separated, the four escort battleships remaining above while the *Markab* sank toward a colossal, cubical black pile.

The cruiser landed in a big court. They glimpsed soldiers running toward it—Cloud-men, pallid-faced men in dark uniforms.

It was some minutes before the door of

their own cabin opened. Thern Eldred stood in it with two alert League officers.

"We have arrived and I learn that Shorr Kan wishes to see you at once," the Sirian traitor told Gordon. "I beg you to make no resistance, which would be wholly futile and foolish."

Gordon had had two experiences with the glass paralyzers to convince him of that. He stood, with Lianna's hand in his, and nodded curtly.

"All right. The sooner we get this over with, the better."

They walked out of the ship, their gravitation-equalizers* preventing them from feeling any difference in gravity. The air was freezing and the depressing quality was increased by the murky gloom that was thickening as the red sun set.

Cold, gloomy, shadowed forever by the haze, this world at the heart of the Cloud struck Gordon as a fitting place for the hatching of a plot to rend the galaxy.

"This is Durk Undis, a high officer of the League," the Sirian was saying. "The Prince Zarth Arn and the Princess Lianna, Durk."

Durk Undis, the League officer, was a young man. But though he was not unhandsome, his pallid face and deep eyes had a look of fanaticism in them.

He bowed to Gordon and the girl, and gestured toward a doorway.

"Our Commander is waiting," he said clippedly.

Gordon saw the gleam of triumph in his eye, and in the faces of the other rigid Cloud-men they passed.

He knew they must be exultant, at this capture of one of the Empire's royal family and at the striking down of mighty Arn Abbas.

"This ramp, please," Durk Undis said, as they entered the building. He could not help adding proudly to Gordon, "You are doubtless surprised at our capital? We

* Note: The gravitational-equalizers were marvelously compact projectors worn in a tiny belt-case by everyone, in this star-travelling age. They automatically gave the body a positive or negative magnetic-gravitational charge that made weight the same no matter how large or small a world was visited.

have no useless luxuries here."

Spartan simplicity, an austere bareness, reigned in the gloomy halls of the great building. Here there was none indeed of the luxury and splendor of the great palace at Throon. Uniforms were everywhere. This was the center of a military empire.

They came to a massive door guarded by a file of stalwart, uniformed Cloud-men armed with atom-guns. These stepped aside, and the door opened.

Durk Undis and the Sirian walked on either side of Gordon and Lianna into a forbidding room.

IT WAS even more austere than the rest of the place. A single desk with its row of visors and screens, a hard, uncushioned chair, a window looking out on the black massiveness of Thallarna—these were all.

The man behind the desk rose. He was tall, broad-shouldered, about forty years of age. His black hair was close-clipped, his strong, pallid face sternly set, and his black eyes harsh and keen.

"Shorr Kan, Commander of the League of the Dark Worlds!" intoned Durk Undis, with fanatic intensity. And then, "These are the prisoners, sir!"

Shorr Kan's stern gaze fastened on Gordon's face, and then briefly on Lianna's.

He spoke in clipped tones to the Sirian. "You have done well, Thern Eldred. You and Chan Corbulo have proved your devotion to the great cause of the League, and you will not find it ungrateful."

He went on, "You had better take your cruiser back at once to the Empire and rejoin your fleet lest suspicion fall on you."

Thern Eldred nodded quickly. "That will be wisest, sir. I shall be ready to execute any orders you send through Corbulo."

Shorr Kan added, "You can go too, Durk. I shall question our two unwilling guests now."

Durk Undis looked worried. "Leave them here with you *alone*, sir? It is true they have no weapons, but—"

Shorr Kan turned a stern face on the young fanatic. "Do you think I stand in any danger from this flabby Empire prince-

ling? And even if there were danger, do you think I would shrink from it if it was required by our cause?"

His voice deepened. "Will not millions of men soon hazard *their* lives for that cause, and gladly? Should one of us shrink from any peril when upon our unswerving devotion depends the success of all we have planned?"

"And we *will* succeed!" rang his voice. "We shall take by force our rightful heritage in the galaxy, from the greedy Empire that thought to condemn us to perpetual banishment in these dark worlds! In that great common enterprise, do you believe I think of risks?"

Durk Undis bowed, almost worshipfully, and the Sirian imitated the action. They withdrew from the room.

Gordon had felt an astonishment, at Shorr Kan's thundering rhetoric. But now he was quickly astonished.

For as the door closed, Shorr Kan's stern face and towering figure relaxed. The League commander lounged back in his chair and looked up at Gordon and Lianna with a grin on his dark face.

"How did you like my little speech, Zarth Arn?" he asked. "I know it must sound pretty silly, but they love that kind of nonsense."

Gordon could only stare, so amazed was he by the sudden and utter transformation in the personality of Shorr Kan.

"Then you don't believe in any of that stuff yourself?" he demanded.

Shorr Kan laughed. "Do I look like a complete fool? Only crazy fanatics would swallow it. But fanatics are the main-spring of any enterprise like this, and I have to be the biggest fanatic of all when I'm talking to them."

He motioned to chairs. "Sit down. I'd offer you a drink but I don't dare to keep the stuff around here. It might be found and that would destroy the wonderful legend of Shorr Kan's austere life, his devotion to duty, his ceaseless toil for the people of the League."

HE LOOKED at them with calmly cynical, keen black eyes for a moment.

"I know a good bit about you, Zarth Arn. I've made it my business to find out. And I know that while you're a scientific enthusiast rather than a practical man, you're a highly intelligent person. I'm also aware that your fiancée, the princess Lian-na, is not a fool.

"Very well, that makes things a lot easier. I can talk to intelligent people. It's these idiots who let their emotions rule them who have to be handled with high-sounding nonsense about destiny, and duty, and their sacred mission."

Gordon, his first shock of surprise over, began to understand this ruler whose name shadowed the whole galaxy.

Utterly intelligent, and yet at the same time utterly cynical, ruthless, keen and cold as a sword-blade, was Shorr Kan.

Gordon felt a strange sense of inferiority in strength and shrewdness to this arch-plotter. And that very feeling made his hatred more bitter.

"You expect me to discuss things calmly with you, after having me brought here by force and branded to the galaxy as a par-ricide?"

Shorr Kan shrugged. "I admit that that's unpleasant for you. But I had to have you here. You'd have been here days ago, if the men I sent to seize you at your Earth laboratory hadn't failed."

He shook his dark head ruefully. "It just shows how chance can upset the cleverest plans. They should have had no trouble bringing you from Earth. Corbulo had given us a complete schedule of the Empire patrols in that sector, so they could be avoided. And then that cursed Antarian captain had to make an unscheduled visit to Sol!"

The Cloud-leader concluded. "So I had to get you here some other way, Prince Zarth. And the best way was to send you an incriminating thought-message that would get you into trouble. Corbulo, of course, had orders to 'discover' my messenger, and then later to assist your flight from Throon so his killing of Arn Abbas would be blamed on you!"

Gordon seized on one point in that explanation. "Then it's true that Chan Cor-

bulo is working for you?"

Shorr Kan grinned. "I'll wager that was a bad shock to you, wasn't it? Corbulo is pretty cunning. He's mad for power, for a star-kingdom of his own to rule. But he's always concealed that under the bluff, honest space-man pose that made the whole Empire admire him."

He added, "It may assuage your disillusion to learn that only Corbulo and a score of other officials and officers in the Empire are traitors. But they're enough to wreck the Empire fleet's chances when it comes to the showdown."

Gordon leaned forward tensely. "And just when is that showdown going to come?"

CHAPTER XIII

Master of the Cloud

SHORR KAN lounged back in his chair before he answered. "Zarth Arn, that depends to some extent on whether or not you're willing to cooperate with me."

Lianna spoke scornfully. "By 'cooperate' you mean, betray the Empire."

The League commander was not ruffled. "That's one way of putting it. I'd prefer to define it as simply to become realistic."

He leaned forward and his strong, mobile face was in deep earnest as he continued.

"I'll put my cards on the table, Zarth. The League of Dark Worlds has secretly built up its fleet here stronger than the Empire navy. We have every weapon of war you have, and a brand new weapon that will play the devil with your fleet when we use it."

"What kind of a weapon? Sounds like a bluff to me," commented Gordon.

Shorr Kan grinned. "You can't fish information out of me. But I will tell you that it's a weapon that can strike down enemy warships from *inside* them."

He added, "With that new weapon, with our powerful fleet, and above all with your Commander Corbulo secretly in our pay, your Empire fleet won't have a chance when we attack! We'd have attacked before now if it hadn't been for one thing.

And that's the Disruptor.

"Corbulo couldn't tell us about the Disruptor, since only the royal house of the Empire are allowed to know about it. And while the traditions of its awful power may be exaggerated, we know well that they are not baseless. For your ancestor Brenn Bir did with the Disruptor somehow completely annihilate the alien Magellanians who invaded the galaxy two thousand years ago."

Shorr Kan's face tightened. "You know the secret of that mysterious weapon or power, Zarth. And I want it from you!"

John Gordon had expected no less. But he continued to fence. "I suppose," he said ironically, "that you're going to offer me a star-kingdom if I give you the secret of the Disruptor?"

"More than that," Shorr Kan said levelly. "I'm offering you the sovereignty of the whole galaxy!"

Gordon was astonished by the audacity of this man. There was something breathtaking about him.

"We agreed to talk intelligently," Gordon snapped. "Do you suppose me stupid enough to believe that after you conquered the Empire and power over the whole galaxy, you'd give it to me?"

Shorr Kan smiled. "I said nothing about giving you the *power*. I spoke of giving you rule. They are different things."

He explained rapidly. "Once the Disruptor secret is mine, I can shatter the Empire and dominate the galaxy. But half the galaxy would still hate me as a usurper, an alien. There would be endless revolts and unrest.

"So, once I've got my hand on everything, I'd put forward Zarth Arn, legitimate son of the late Arn Abbas, as new sovereign of the galaxy! I, Shorr Kan, would merely be your trusted advisor. It would be a peaceful federation of the whole galaxy, I'd announce."

He grinned again. "See how much simpler it would make things for me? A legitimate emperor, no revolts, no unrest. You and Lianna would be the rulers, and enjoy every luxury and respect. I don't care for the pomp and outward show of power, and would be quite content to wield the real

power from behind the throne."

"And if I decided to use my position as nominal ruler to turn the tables on you?" Gordon asked curiously.

SHORR KAN laughed. "You wouldn't, Zarth. The core of the armed forces would be loyal Cloud-men I could trust."

He stood up. "What do you say? Remember that right now you're a fugitive from the Empire, sought for the murder of your own father. All that can be cleared up, the charge can be disproved, and you can live the greatest sovereign in history. Isn't it intelligent to do so?"

Gordon shrugged. "Your proposal is certainly clever. But I'm afraid you've wasted your time. The stumbling-block is that under no circumstances will you get the Disruptor secret from me."

He expected a burst of rage from the League ruler. But Shorr Kan merely looked disappointed.

"I was hoping you'd be clearheaded enough to discount all this nonsense about patriotism and loyalties, and use a little sense."

Lianna flashed, "Of course you cannot understand loyalty and honor, when you have none yourself!"

Shorr Kan looked at her frowningly, though still apparently without anger.

"No, I don't have any," he agreed. "What, after all, are loyalty, honor, patriotism, all those admirable qualities? Just ideas that people happen to think are praiseworthy, and therefore will die for. I'm a realist. I refuse to injure myself for any mere idea."

He turned again to Gordon. "Let's not talk any more about it right now. You're tired, your nerves are taut, you're in no shape to make a decision. Get a good night's rest, and think it over tomorrow—and use your brains, not your emotions. You'll surely see that I'm right."

He added, more slowly, "I could tell you that if you persist in refusing to cooperate, there's a highly unpleasant alternative. But I don't want to threaten you, Zarth! I want you to come in with me, not from any love of me or the League, but simply because

you're smart enough to recognize your own interests."

Gordon for the first time glimpsed the steel within the velvet glove, as he saw the glint in Shorr Kan's black eyes.

The League commander had pressed a signal-button as he spoke. The door opened and Durk Undis entered.

"Give Prince Zarth and his fiancée the best possible quarters," Shorr Kan told the younger Cloud-man. "They must be strictly guarded, but let the guard be unobtrusive. Any disrespect to them will be severely punished."

Durk Undis bowed and stood waiting. Gordon took Lianna's arm and silently left the room.

All the way through the corridors and ramps of the gloomy building, Gordon felt that unsettling sense of having met a man who was far stronger than he in shrewdness and cunning, and who might be able to handle him like putty.

This huge citadel of the League of Dark Worlds was a dreary place, by night. The lights that glowed at intervals along its corridors could not dispel the insidious haze that wrapped this world.

The apartment to which they were conducted was far from luxurious. The square, white-walled rooms were strictly utilitarian in design and furniture, with transparent sections of wall looking out over the somber city Thallarna.

Durk Undis bowed stiffly to them. "You will find nutrition-dispensers and all else needful. Let me warn you not to try venturing out of these rooms. Every exit is strictly guarded."

When the League officer had gone, John Gordon turned and looked at Lianna, who stood by the window.

Something in the brave erectness of her little figure choked him with tenderness. He went to her side.

"Lianna, if I could assure *your* safety by giving up the secret of the Disruptor, I would," he said huskily.

SHE turned quickly. "You must not give it up! Without it, Shorr Kan still hesitates to move. And while he hesitates,

there is a chance that Corbulo's treachery may be discovered."

"There's little chance of our exposing him, I'm afraid," Gordon said. "There's no possibility of escape from here."

Lianna's slim shoulders sagged a little. "No, I realize that," she murmured. "Even if by some miracle we could escape this building and seize a ship, we could never find our way out through the mazes of the Cloud."

The Cloud! It was the sky here, dark, heavy and menacing, showing no star as it ebon folds enwrapped this grim city.

That dark sky gave Gordon a feeling of claustrophobia, a sense of all the trillions of miles of shadowy gloom that encompassed him and shut him from the star-bright spaces of the galaxy outside.

Thallarna was not sleeping. Out there in the severely straight streets streamed many heavy vehicles. Fliers came and went in swarms. Thunderous reverberations droned dimly to them from the distant docks where squadrons of heavy warships were constantly coming and going.

Gordon took the couch in the living-room of their austere apartment, without expectation of being able to sleep. But his tired body relaxed in almost drugged slumber in a short time.

Dawn awoke him—a sickly, shadowy dawn that only slowly revealed the outlines of the room. He found Lianna sitting on the edge of his couch, looking down at him with curious intentness.

She flushed slightly. "I wondered if you were awake. I have our breakfast ready. It is not bad, the nutritional fluid. Though it's likely to become monotonous."

"I doubt if we will be here long enough to grow tired of it," Gordon said grimly.

She looked at him. "You think that Shorr Kan will insist on your giving him the Disruptor secret today?"

"I'm afraid so," he said. "If that secret is all that is holding back his attack, he'll want it as soon as possible."

Through the hours of the gloomy day, as the red sun swept with somber slowness across the shadowy sky, they expected Shorr Kan's summons.

But it was not until night had returned that Durk Undis and four armed soldiers entered the apartment.

The young fanatic Cloud-man again bowed stiffly. "The commander will see you now, Prince Zarth. Alone," he added quickly, as Lianna stepped forward with Gordon.

Lianna's eyes flashed. "I go where Zarth goes!"

"I regret that I must carry out my orders," said Durk Undis coldly. "Will you come now, Prince Zarth?"

Lianna apparently realized the hopelessness of further resistance. She stood back.

Gordon hesitated, then let impulse sweep him and strode back to her. He took her face between his hands and kissed her.

"Don't worry, Lianna," he said, and turned away.

His heart beat painfully as he followed Durk Undis through the corridors. He was certain that he had seen Lianna for the last time.

Maybe better this way! he thought. Maybe better to forget her in death than to go back to his own time and be forever haunted by memory of love irrevocably lost!

Gordon's desperate thoughts received a check when he followed his guards into a room. It was not the austere study of the previous day.

THIS was a laboratory. There was a table, above which hung a massive metal cone connected by cables to a complicated apparatus of banked vacuum tubes and moving tapes. Here were two thin, nervous-looking Cloud-men—and Shorr Kan.

Shorr Kan dismissed Durk Undis and the guards, and quickly greeted Gordon.

"You've slept, rested? That's good. Now tell me what you've decided."

Gordon shrugged. "There was no decision to make. I can't give you the secret of the Disruptor."

Shorr Kan's strong face changed slightly in expression, and he spoke after a pause.

"I see. I might have expected it. Old mental habits, old traditions—even intelli-

gence can't conquer them, sometimes."

His eyes narrowed slightly. "Now listen, Zarth. I told you yesterday that was an unpleasant alternative if you refused. I didn't go into details because I wanted to gain your willing cooperation.

"But now you force me to be explicit. So let me assure you first of one thing. I am going to have the Disruptor secret from you, whether you give it willingly or not."

"Torture, then?" sneered Gordon. "That is what I expected."

Shorr Kan made a disgusted gesture. "Fough, I don't use torture. It's clumsy and undependable, and alienates even your own followers. No, I have quite another method in mind."

He gestured to the older of the two nervous-looking men nearby. "Land Allar, there, is one of our finest psycho-scientists. Some years ago he devised a certain apparatus which I've been forced to utilize several times.

"It's a brain-scanner. It literally reads the brain, by scanning the neurones, plotting the synaptic connections, and translating that physical set-up into the knowledge, memories and information possessed by that particular brain. With it, before this night is over, I can have the Disruptor secret right out of your brain."

"That," said John Gordon steadily, "is a rather unclever bluff."

Shorr Kan shook his dark head. "I assure you it is not. I can prove it to you if you want me to. Otherwise, you must take my word that the scanner *will* take everything from your brain."

He went on, "The trouble is that the impact of the scanning rays on the brain for hour after hour in time breaks down the synaptic connections it scans. The subject emerges from the process a mindless idiot. That is what will happen to you if we use it on you."

The hair bristled on Gordon's neck. He had not a doubt now that Shorr Kan was speaking the truth. If nothing else, the pale, sick faces of the two scientists proved his assertion.

Weird, fantastic, nightmarishly horrible—yet wholly possible to this latterday sci-



"Your last chance, Zarth! Make a signal and you can still avoid this fate."

ence! An instrument that mechanically read the mind, and in reading wrecked it!

"I don't want to use it on you, I repeat," Shorr Kan was saying earnestly. "For as I told you, you'd be extremely valuable to me as a puppet emperor after the galaxy is conquered. But if you persist in refusing to tell that secret, I simply have no choice."

John Gordon felt an insane desire to laugh. This was all too ironic.

"You've got everything so nicely calculated," he told Shorr Kan. "But again, you find yourself defeated by pure chance."

"Just what do you mean?" asked the League ruler, with dangerous softness.

"I mean that I can't tell you the secret of the Disruptor because *I don't know it!*"

Shorr Kan looked impatient. "That is a rather childish evasion. Everyone knows that as son of the emperor you would be told all about the Disruptor."

Gordon nodded. "Quite true. But I happen not to be the emperor's son. I'm a different man entirely."

Shorr Kan shrugged. "We are gaining nothing by all this. Go ahead."

The last words were addressed to the

two scientists. At that moment Gordon savagely leaped for Shorr Kan's throat!

He never reached it. One of the scientists had a glass paralyzer ready, and swiftly jabbed it at the back of his neck.

Gordon sank, shocked and stunned. Only dimly, he felt them lifting him onto the metal table. Through his dimming vision, Shorr Kan's hard face and cool black eyes looked down.

"Your last chance, Zarth! Make but a signal and you can still avoid this fate."

Gordon felt the hopelessness of it all, even as his raging anger made him glare up at the League commander.

The paralyzer touched him again. This shock was like a physical blow. He just sensed the two scientists busy with the massive metal cone above his head, and then darkness claimed him.

CHAPTER XIV

Dark-World Menace

GORDON came slowly to awareness of a throbbing headache. All the devil's triphammers seemed to be pounding inside

his skull, and he felt a sickening nausea.

A cool glass was held to his lips, and a voice spoke insistently in his ear.

"Drink this!"

Gordon managed to gulp down a pungent liquid. Presently his nausea lessened and his head began to ache less violently.

He lay for a little time before he finally ventured to open his eyes. He still lay on the table, but the metal cone and the complicated apparatus were not now in sight.

Over him was bending the anxious face of one of the two Cloud scientists. Then the strong features and brilliant black eyes of Shorr Kan came down in his field of vision.

"Can you sit up?" asked the scientist. "It will help you recover faster."

The man's arm around his shoulders enabled Gordon weakly to slide off the table and into a chair.

Shorr Kan came and stood in front of him, looking down at him with a queer wonder and interest in his expression.

He asked, "How do you feel now, *John Gordon?*"

Gordon started. He stared back up at the League commander.

"Then you know?" he husked.

"Why else do you think we halted the brain-scanning?" Shorr Kan retorted. "If it weren't for that, you'd be a complete mental wreck by now."

He shook his head wonderingly. "By Heaven, it was incredible! But the brain-scanner can't lie. And when the first minutes of its reading drew out the fact that you were John Gordon's mind in Zarth Arn's body, and that you did *not* know the Disruptor secret, I stopped the scanning."

Shorr Kan added ruefully. "And I thought I had that secret finally in my grasp! The pains I've taken to fish Zarth Arn into my net, and all for nothing! But who'd dream of a thing like this, who'd guess that a man of the ancient past was inside Zarth's body?"

Shorr Kan knew! John Gordon tried to rally his dazed faculties to deal with this startling new factor in the situation.

For the first time, someone in this future universe was cognizant of the weird impos-

ture he had carried out! Just what would that mean to him?

Shorr Kan was striding to and fro. "John Gordon of ancient Earth, of an age two hundred thousand years in the past, here inside the brain and body of the second prince of the Empire! It still doesn't make sense!"

Gordon answered weakly. "Didn't your scanner tell you how it happened?"

The League commander nodded. "Yes, the outlines of the story were clear after a few minutes' scanning, for the whole fact of your imposture was uppermost in your mind."

Ht uttered a soft curse. "That young fool Zarth Arn! Trading bodies with another man across time! Letting his crazy scientific curiosity about the past take him ages away, at the very moment his Empire is in danger."

He fastened his gaze again on Gordon. "Why in the devil's name didn't you tell me?"

"I tried to tell you, and got nowhere with it," Gordon reminded him.

Shorr Kan nodded. "That's right, you did. And I didn't believe. Who the devil *would* believe a thing like this, without the brain-scanner's proof of it?"

He paced to and fro, biting his lip. "Gordon, you've upset all my careful plans. I was sure that with you I had the Disruptor secret."

JOHAN GORDON'S mind was working swiftly now as his strength slowly returned. The discovery of his true identity changed his whole situation.

It might give him a remote chance of escape! A chance to get away with Lianna and warn the Empire of Corbulo's treachery and the imminent danger! Gordon thought he dimly saw a way.

He spoke a little sullenly to Shorr Kan. "You're the first one to discover the truth about me. I deceived all the others—Arn Abbas, Jhol Arn, Princess Lianna. They didn't dream the truth."

Shorr Kan's eyes narrowed a little. "Gordon, that sounds as though you *liked* being prince of the Empire?"

Gordon laughed mirthlessly. "Who wouldn't? Back in my own time I was a nobody, a poor ex-soldier. Then, after Zarth Arn proposed that strange exchange of bodies across time, I found myself one of the royal family of the greatest star-kingdom in the universe! Who wouldn't like that change?"

"But you had promised to go back to Earth and re-exchange bodies with Zarth Arn, according to what the scanner revealed," pointed out Shorr Kan. "You'd have had to give up all your temporary splendor."

Gordon looked up at him, with what he hoped was a cynical expression.

"What the devil?" he said contemptuously to Shorr Kan. "Do you really think I'd have kept that promise?"

The League commander stared at him intently. "You mean that you were planning to deceive the real Zarth Arn, and *keep* his body and identity?"

"I hope you're not going to get righteous with me!" flared Gordon. "It's what you would have done yourself in my place, and you know it!"

"Here I was, set for life as one of the great men of this universe, about to marry the most beautiful girl I've ever seen. No one could possibly ever doubt my identity. All I had to do was simply forget my promise to Zarth Arn. What would *you* have done?"

Shorr Kan burst into laughter. "John Gordon, you're an adventurer after my own heart! By Heaven, I see that they bred bold men back in those ancient times on Earth!"

He clapped Gordon on the shoulder, his good spirits seeming partly restored.

"Don't get downhearted because I know the truth about you, Gordon. No one else knows it, except these scientists who'll never speak. You might still be able to live out your life as Prince Zarth Arn."

Gordon pretended to catch eagerly at the bait. "You mean—you wouldn't give me away?"

"That's what I mean. You and I ought to be able to help each other," Shorr Kan nodded.

Gordon sensed that the high-powered brain behind those keen black eyes was working rapidly.

He realized that trying to fool this utterly intelligent and ruthless plotter was the hardest task he had ever essayed. But unless he succeeded, Lianna's life and the Empire's safety were forfeit.

Shorr Kan helped him to his feet. "You come with me and we'll talk it over. Feel like walking yet?"

When they emerged from the laboratory, Durk Undis stared at Gordon as though he saw a man risen from the dead.

The fanatic young Cloud-man had not expected him to emerge from that room living and sane, Gordon knew.

Shorr Kan grinned. "It's all right, Durk. Prince Zarth is cooperating with me. We shall go to my apartments."

"Then you already have the Disruptor secret, sir?" burst out the young fanatic eagerly.

Shorr Kan's quick frown checked him. "Are you questioning me?" snapped the commander.

AS THEY walked on, John Gordon's mind was busy with this byplay. It encouraged him in the belief that his dim scheme might be made to work.

But he would have to go carefully, carefully! Shorr Kan was the last man in the universe to be easily deceived. Gordon sweated with realization that he walked a sword-edge over an abyss.

Shorr Kan's apartments were as austere as the bare office in which Gordon had first seen him. There were a few hard chairs, bare floors, and in another room an uncomfortable-looking cot.

Durk Undis had remained outside the door. As Gordon looked around, Shorr Kan's mocking smile returned.

"Miserable hole for the master of the Cloud to live in, isn't it?" he said. "But it all helps to impress my devoted followers. You see, I've worked them up to attack the Empire by stressing the poverty of our worlds, the hardness of our lives. I daren't live soft myself."

He motioned Gordon to a chair, and

then sat down and looked at him intently. "It's still cursed hard to believe," he declared. "Talking here to a man of the remotest past! What was it like, that age of yours when men hadn't even left the little Earth?"

Gordon shrugged. "It wasn't so much different, at bottom. There was war and conflict, over and over. Men don't change much."

The League commander nodded emphatically. "The mob remains always stupid. A few million men fighting on your old planet, or ten thousand star-worlds ranged against each other in this universe—it's the same thing at bottom."

He continued swiftly. "Gordon, I like you. You're intelligent, daring and courageous. Since you *are* intelligent, you understand that I wouldn't let a mere passing liking influence me in your favor. But my own interests influence me, powerfully. I think we can help each other.

He leaned forward. "You're not Zarth Arn. But no one in the universe knows that fact, but me. So, to the galaxy, you *are* Zarth Arn. And as such, I can use you as I hoped to use the real Zarth, to act as puppet ruler after the Cloud has conquered the galaxy."

John Gordon had hoped for this. But he pretended startled astonishment.

"You mean, you'd make me the nominal ruler of the galaxy?"

"Why not?" retorted the other. "As Zarth Arn, one of the Empire's royal blood, you'd still serve to quiet rebellion after the Empire is conquered. Of course, I'd wield the real power, as I said."

He added frankly, "From one viewpoint you're better for my purpose than the real Zarth Arn. He might have had scruples, might have given me trouble. But you have no loyalties in this universe, and I can depend on you to stick with me from pure self-interest."

Gordon felt a brief flash of triumph. That was exactly what he had wanted Shorr Kan to think—that he, John Gordon, was merely an ambitious, unscrupulous adventurer from the past.

"You'd have everything you could de-

sire!" Shorr Kan was continuing. "Outwardly, you'd be the ruler of the whole galaxy. The Princess Lianna for your wife, power and wealth and luxury beyond your dreams!"

Gordon pretended a stunned, rapt wonder at the prospect. "I, the emperor of the galaxy? I, John Gordon?"

And then suddenly, without warning, the plan he was precariously trying to carry through slipped away from Gordon's mind and the voice of the tempter whispered in his ear.

He *could* do this thing, if he wanted to! He *could* be at least nominally the supreme sovereign of the entire galaxy with all its thousand on thousands of mighty suns and circling worlds! He, John Gordon of New York, could rule a universe with Lianna at his side!

All he had to do was to join with Shorr Kan and attach his loyalty to the Cloud. And why shouldn't he do that? What tie bound him to the Empire? Why shouldn't he strike out for himself, for such power and splendor as no man in all human history had ever dreamed of attaining?

CHAPTER XV

Mystery of the Galaxy

JOHN GORDON fought a temptation whose unexpectedness added to its strength. He was appalled to realize that he wanted with nearly all his soul to seize this unprecedented opportunity.

It wasn't the pump and power of galactic rule that tempted him. He had never been ambitious for power, and anyway it would be Shorr Kan who had the real power. It was the thought of Lianna that swayed him. He'd be with her always then, living by her side—

Living a lie! Pretending to be another man, haunted for the rest of his life by memory of how he had betrayed Zarth Arn's trust and wrecked the Empire! He couldn't do it! A man had his code to live by, and Gordon knew he could never break his pledge.

Shorr Kan was watching him keenly.

"You seem stunned by the prospect, Gordon. It's a tremendous opportunity for you, all right."

Gordon rallied his wits. "I was thinking that there are lots of difficulties. There's the Disruptor secret, for instance."

Shorr Kan nodded thoughtfully. "That's our biggest difficulty. And I was so sure that once I had Zarth Arn, I'd have it!"

He shrugged. "But that can't be helped. We shall have to make our attack on the Empire without it, and rely on Corbulo to see that Jhal Arn never gets a chance to use the Disruptor."

"You mean—assassinate Jhal Arn as he did Arn Abbas?" questioned Gordon.

The Cloud-man nodded. "Corbulo was to do that anyway on the eve of our attack. He'll be appointed one of the regents for Jhal's child. Then it'll be even easier for him to sabotage the Empire's defense."

Gordon realized that Shorr Kan's failure to gain the Disruptor secret was not going to stave off the League's impending attack!

"Those are *your* problems," Gordon said bluntly. "It's my own prospects I was thinking of. You're to make me puppet emperor when the galaxy is conquered. But if we don't have that Disruptor secret, maybe your own League forces won't accept me."

Shorr Kan frowned. "Why should they refuse to accept you on that account?"

"They, like everyone else, think I'm Zarth Arn and believe I know the Disruptor secret," Gordon pointed out. "They'll ask, 'If Zarth Arn is now on our side, why doesn't he give us that secret?'"

The Cloud-man swore. "I hadn't thought of that difficulty. Curse the Disruptor, anyway! Its existence hampers us at every turn!"

"What is the Disruptor, really?" Gordon asked. "I've had to pretend I know all about it, but I haven't any idea what it is."

"No one has!" Shorr Kan replied. "Yet it's been a terrible tradition in the galaxy for the last two thousand years."

"Two thousand years ago the alien, un-human Magellanians invaded the galaxy. They seized several star-systems and prepared to expand their conquests. But

Brenn Bir, one of the great scientist-kings of the Empire, struck out against them with some fearful power or weapon. Tradition says he destroyed not only the Magellanians but also the star-systems they infested, and nearly destroyed the galaxy itself!

"Just what Brenn Bir used, no one now knows. It's been called the Disruptor, but that tells nothing. The secret of it, known only to the Empire's royal house, has never been used since. But memory of it haunts the galaxy, and has maintained the Empire's prestige ever since."

"No wonder you've tried to get hold of it before attacking the Empire," said Gordon. "But there's still a way we can get that secret!"

Shorr Kan stared. "How? Jhal Arn is the only remaining one who knows about it, and we've no chance of capturing him."

"There's one other man who knows the secret," Gordon reminded swiftly. "*The real Zarth Arn!*"

"But the real Zarth's mind is back in that remote past age in your body—," Shorr Kan began. Then he stopped, eyeing Gordon narrowly. "You've something in mind. What?"

GORDON was tense as he unfolded the scheme on which his dim, precarious plan of escape depended.

"Suppose we can make the real Zarth tell us that secret, across time?" he proposed boldly. "There in Zarth's laboratory on Earth are the psycho-mechanisms by which I could speak to him across time. I learned the method from Vel Quen, and I could reach him."

"Suppose I tell him—Shorr Kan's men hold me prisoner and won't release me unless I tell the Disruptor secret, which I don't know. I won't be permitted to re-exchange minds with you until they have the secret."

"Suppose I tell the real Zarth *that*? What do you think he'll do? He doesn't want to be marooned back there in my own world and age, in my own body, for the rest of his life. This is his universe, he's got a morganatic wife here he dearly loves, he'd

sacrifice anything to get back here. He'll tell us that secret, across time!"

Shorr Kan looked at him in wondering admiration. "By Heaven, Gordon, I believe it would work! We *could* just get the Disruptor secret that way!"

He stopped and asked suddenly, "Then when you had forced that secret out of Zarth, you'd re-exchange minds with him?"

Gordon laughed. "Do I look like a complete fool? Of course I won't. I'll simply break the contact then and let Zarth Arn live the rest of his life back in my own time and body while I keep on playing *his* part."

Shorr Kan threw back his head in a burst of laughter. "Gordon, I repeat, you're a man after my own heart!"

He began to pace to and fro as seemed his habit when thinking rapidly.

"The main difficulty will be to get you to Earth to make that contact with the real Zarth," he declared. "Empire patrols are thick all along the frontier, and the main Empire fleet is maneuvering near the Pleiades. And Corbulo can't order that whole region cleared, without arousing suspicion."

Shorr Kan paused, then continued. "The only kind of League ship that has any chance of reaching Earth through all that is a phantom-cruiser. Phantoms are able to slip through tight places, where even a battle-squadron couldn't fight a way."

Gordon, who had only the mistiest notion of what kind of a warship was mentioned, looked puzzled. "A phantom? What's that?"

"I forgot for a moment that you're really a stranger in this age," Shorr Kan said. "A phantom-cruiser is a small cruiser with armament of a few very heavy atom-guns. It can become totally invisible in space."

He explained, "It does that by projecting a sphere of force around itself that refracts perfectly all light and radar rays. So no ship can detect it. But to hold that concealing sphere of force requires terrific power, so a phantom is only good for twenty or thirty hours travel 'dark'."

John Gordon nodded understandingly. "I get it. And it looks like the best chance to reach Earth, all right."

"Durk Undis will go with you with a full crew of trusted men," Shorr Kan continued.

That was bad news to Gordon. That fanatic young Cloud-man hated him, he knew.

"But if Durk Undis learns that I'm not really Zarth Arn—," he began to object.

"He won't," Shorr Kan interrupted. "He'll simply know that he's to take you to your laboratory on Earth for a brief time, and that he's to bring you back safely."

Gordon eyed the Cloud-man. "It sounds as though he's to be a guard. You don't entirely trust me?"

"What the devil made you think I did?" Shorr Kan retorted cheerfully. "I trust no man entirely. I do trust to men following their self-interest, and that's why I feel I can rely on you. But just to make sure—Durk Undis and a crew of picked men go with you."

AGAIN, Gordon chilled to a realization that he was playing his desperate game against a man so shrewd and skilled in intrigue that it seemed almost hopeless he could succeed.

He nodded coolly, however. "That's fair enough. But I might also say that I don't entirely trust *you*, Shorr Kan. And for that reason, I don't go on this mission unless Lianna goes with me."

Shorr Kan looked genuinely surprised for a moment. "The Fomalhaut girl? Your fiancée?"

Then an ironic smile flickered in his eyes. "So that's your weak point, Gordon—that girl?"

"I love her and I'm not going to leave her here for you to tamper with," Gordon asserted sullenly.

Shorr Kan snorted. "If you knew me better, you'd know that one woman means no more to me than another. Do you think I'd risk my plans for a pretty face? But if you're jealous, you can take her with you."

He added, "How are you going to explain it all to her, though? You can't very well tell her the truth about our deal."

Gordon had thought of that already. He said slowly, "I'll make up a story that you're going to let us go if I bring you cer-

tain valuable scientific secrets from my Earth laboratory."

Shorr Kan nodded understandingly. "That will be your best course."

He added rapidly, "I'll give orders at once to have our best phantom-cruiser prepared. You ought to be able to start tomorrow night."

Gordon stood up. "I'll be glad to get some rest. I feel as though I'd been through a grinder."

Shorr Kan laughed. "Man, that's nothing to what the brain-scanner would have made of you if it had run longer than a few minutes. What a twist of fate! Instead of a mindless idiot, you're to be nominal emperor of the galaxy!"

He added, his face setting for just a moment to a steely hardness, "But never forget that your power is only nominal and that it is *I* who will give the orders."

Gordon met his searching gaze steadily. "I might forget it if I thought I'd gain by that. But I'm pretty sure I wouldn't. I'm pretty sure that once I'm ruler, I'll fall if you fall. So you will be able to rely on me—or on my self-interest."

The Cloud-man chuckled. "You're right. Didn't I say I always like to deal with intelligent people? We'll get along."

He pressed a button. When Durk Undis quickly entered the room, he told him:

"Escort Prince Zarth back to his quarters and then return here for orders."

All the way back through the corridors, Gordon's thoughts were feverish. Relaxation from the intolerable strain of playing his part left him trembling.

So far, his precarious scheme for escape was succeeding. He had gambled on Shorr Kan's ruthless, cynical personality reacting in a certain way, and had won.

BUT he well knew that this success was only the beginning. Ahead loomed far greater difficulties which he had not yet found the least way of solving.

He'd have to go ahead, even though his scheme was suicidal in riskiness! There was no other way.

When he entered the somber apartment, Lianna sprang from a chair and ran toward

him. She grasped his arm.

"Zarth, you're all right?" she cried, her gray eyes shining. "I was afraid—"

She loved him, still. Gordon knew it from her face, and again he felt that wild, hopeless rapture.

He had to fight his impulse to take her into his arms. Something of what he felt must have showed in his face, for Lianna flushed and stepped back a little.

"Lianna, I'm all right though a little shaky," Gordon told her, sinking into a chair. "I had a taste of Cloud science and it wasn't pleasant."

"They tortured you? They made you tell the Disruptor secret?"

He shook his head. "I didn't tell that secret. And I'm not going to. I convinced Shorr Kan he couldn't get it from me."

Gordon went on, telling her as much of the truth as he could. "I made that devil believe that I would have to go to my Earth laboratory to get that secret for him. And he's sending us, to get it. We'll leave in a phantom-cruiser tomorrow night."

Lianna's eyes flashed. "You're going to outwit him? You have some plan?"

"I wish I did," groaned Gordon. "This is as far as my plan goes. It will get us out of the Cloud, that's all. Then it's up to me. Somehow, I'll have to find a way for us to escape that ship and get a warning of Corbulo's treachery to Jhal Arn."

He added wearily, "The only way I can think of is somehow to sabotage the phantom-cruiser so it'll be captured by Empire warships. But how to do that, I don't know. That young fanatic Durk Undis is going with a picked crew to guard us, and it won't be easy."

Faith and courage shone in Lianna's eyes. "You'll find a way somehow, Zarth. I know you will."

Her faith could not overcome the chill realization in Gordon's mind that his hare-brained scheme was almost impossible.

He might be dooming both Lianna and himself by trying it. But they were doomed anyway unless he betrayed the real Zarth Arn and the Empire, and the momentary temptation to do that had left Gordon forever.

He slept heavily, well into the next day. It was dusk when Shorr Kan and Durk Undis finally came.

"Durk Undis has all his orders, and the phantom is ready," Shorr Kan told Gordon. "You should get to Earth in five days, and be back here in eleven."

His face lit. "Then I'll announce to the galaxy that we have the Disruptor secret and that Zarth Arn has joined us, and will give Corbulo the secret signal and launch the League's attack!"

Two hours later, from the huge Thallarna spaceport, the slim, shining phantom-cruiser on which Gordon and Lianna had embarked rose from its dock and plunged headlong out through the Cloud.

CHAPTER XVI

Sabotage in Space

WHEN Gordon and Lianna had entered the *Dendra*, the phantom-cruiser that was to bear them on the mission, they were led to the mid-deck corridor by Durk Undis.

The fanatic young Cloud-man bowed stiffly to them and gestured toward the door of a small suite of two tiny cabins.

"These cabins will be your quarters. You will remain in them until we reach Earth."

"We will *not* remain in them!" Gordon flared. "The princess Lianna is already suffering from the confinement of the voyage here. We'll not stay cooped up in those tiny rooms for days more."

Druk Undis' lean face hardened. "The commander gave orders that you were to be strictly guarded."

"Did Shorr Kan say we were to be imprisoned in two tiny rooms every minute?" Gordon demanded. He saw the slight uncertainty in Durk Undis' face, and pressed his attack. "Unless we have a chance to get a little exercise, we'll refuse to carry out this whole plan."

The fanatic Cloud-man hesitated. Gordon had guessed rightly that Durk Undis did not want to go back to his superior and report the mission aborted by such a slight difficulty.

Finally, Durk Undis said grudgingly, "Very well, you will be permitted to walk in this corridor twice each day. But you will not be allowed in it any other time, or when we're running 'dark'."

The concession was not as much as Gordon had wanted but he guessed that it was the most he could obtain. So, with anger still assumed, he followed Lianna into the cabin-suite and heard the lock click after them.

As the *Dendra* rose from Thallarna and started arrowing out at high speed through the gloomy hazes of the Cloud, Lianna looked inquiringly at Gordon.

"The confinement does not really bother me, Zarth. You have some plan?"

"No more than the plan I already mentioned, of somehow drawing the attention of an Empire patrol to this ship so that it'll be discovered and captured," he admitted.

He added determinedly, "I don't know yet how it can be done but there must be a way."

Lianna looked doubtful. "This phantom undoubtedly has super-sensitive radar equipment, and will be able to spot ordinary patrols long before they spot us. It will dark-out till we're past them."

The steady drone of big drive-generators building up velocity became an unwavering background, in the following hours.

The *Dendra* plunged through hails of tiny meteor-particles, through dust-currents that made it pitch and toss roughly. It often changed direction as it threaded its way out through the Cloud.

It was the middle of the following day before they emerged from the gloomy haze into the vast, clear vault of star-gemmed space. At once, the phantom-cruiser picked up still greater speed.

Gordon and Lianna looked from the window at the brilliant galactic spectacle ahead. To their astonishment, the distant spark of Canopus lay out of sight far on their left. Ahead of the *Dendra* glittered a vault of strange stars in which Orion Nebula glowed in flaming glory.

"We're not heading straight back into the Empire," Lianna said. "They're going to avoid the most guarded Empire frontier

by swinging up west of Orion Nebula and on past the Marches of Outer Space to curve in toward Sol."

"Going the long way around to sneak in to the Empire by the back way!" Gordon muttered. "It's probably the way that Cloud ship came that tried to kidnap me from Earth."

HIS faint hopes sank. "There's less chance of an Empire patrol catching us, if we're going through a little-travelled region."

Lianna nodded. "We are not likely to meet more than a few patrol cruisers, and Durk Undis can slip past them under dark-out."

Discouragedly, Gordon stared out at the brilliant scene. His gaze shifted to the direction in which he knew Canopus must lie.

Lianna caught the direction of his gaze and looked up at him questioningly. "You are thinking of Murn?"

It startled Gordon. He had almost forgotten the dark, lovely girl whom the real Zarth Arn loved.

"Murn? No! I was thinking of that black traitor Corbulo, spinning his plots back there on Throon and just waiting his chance to murder Jhal Arn and wreck the Empire's defenses."

"That is the greatest danger," Lianna agreed soberly. "If they could only be warned of Corbulo's treachery, the League's plan of attack could still be foiled."

"And we're the only ones who can warn them," Gordon muttered.

Yet on the third day after this, he had to confess to himself that it seemed more than ever an impossibility.

The *Dendra* was by now well inside the boundaries of the Empire, beating northward on a course that would take it just west of the gigantic, glowing Orion Nebula.

Once beyond the great Nebula, they would fly northwestward along the little-travelled edges of the Marches of Outer Space. Few Empire warships would be in the region bordering that wild frontier of unexplored star-systems. And Sol and its planet Earth would be nearby, then.

Twice during these three days, an alarm

bell had rung through the *Dendra* as its radar operators detected Empire warships nearby. Each time, in their cabins, Gordon and Lianna had seen the whole vault of space outside the window suddenly blacked out.

Gordon had exclaimed in astonishment when it first happened. "What's wrong? All space has gone dark!"

Lianna looked at him in surprise. "They've turned on the dark-out of our ship. You surely remember that when a phantom-cruiser runs dark, those inside it can see nothing of outside space?"

"Oh, of course," Gordon said hastily. "It's been so long since I've been in one of these craft that I'd forgotten."

He understood now what was happening. The new, loud whine that permeated the cruiser was the sound of the dark-out generators that were flinging an aura of potent force around the ship.

That aura slightly refracted every ray of light or radar beam that struck it, so that the phantom-cruiser could neither be seen or ranged by radar. Of necessity, that deflection of all outside light left the cruiser moving in utter darkness.

Gordon heard the dark-out generators down in the lower deck whining for nearly an hour. They apparently required almost all the power of the ship, the drive-machinery merely purring and the ship moving almost on inertia.

The thing happened again the following morning, when the *Dendra* was drawing up closer to the west borders of Orion Nebula. That glowing mass now stretched billions of miles across the firmament beside them.

Gordon saw many hot stars inside the Nebula. He recalled that it was their electron-barrage that excited the hazy dust of the Nebula to its brilliant glow.

That "evening," he and Lianna were walking in the long corridor under the close scrutiny of an armed Cloud-man when the alarm bell again rang sharp warning through the ship.

THE Cloud-man instantly stepped forward. "Dark-out! Return to your cabins immediately!"

Gordon had hoped for a chance like this and resolved to seize it. They might never have another.

As the familiar whine of the dark-out came on, as he and Lianna moved toward their cabins, he leaned to whisper to her.

"Act faint and collapse just as we enter the cabin!"

Lianna gave not a sign of hearing him, except that her fingers quickly pressed his hand.

The Cloud-officer was a half-dozen paces behind them, his hand resting on the butt of his atom-pistol.

Lianna, at the door of the cabin, tottered weakly and pressed her heart.

"Zarth, I feel ill!" she whispered huskily, then began to sag to the floor.

Gordon caught her, held her. "She's fainted! I knew this confinement would be too much for her!"

He turned angrily toward the startled Cloud-man. "Help me get her into the cabin!" Gordon snapped.

The officer was anxious to get them out of the corridor. His orders had been that they were immediately to be re-confined whenever a dark-out began.

Zeal to obey his orders betrayed him. The Cloud-man stepped forward and stooped to help pick up Lianna and carry her inside.

As he did so, Gordon acted! He callously let Lianna fall to the floor, and snatched at the butt of the Cloud-man's atom-gun.

So swift was his movement that he had the gun out of its holster before the other realized it. The Cloud-man began to straighten and his mouth opened to yell an alarm.

Gordon smashed the barrel of the heavy atom-pistol against the man's temple below his helmet. The officer's face relaxed blankly, and he slumped like a bag of rags.

"Quick, Lianna!" sweated Gordon. "Into the cabin with him!"

Lianna was already on her feet. In an instant, they had dragged the limp form into the little room and shut the door.

Gordon stooped over the man. The skull was shattered.

"Dead," he said swiftly. "Lianna, this

is my chance!"

He was beginning to strip off the dead man's jacket. She flew to his side. "Zarth, what are you going to do?"

"There must be at least one Empire patrol cruiser nearby," Gordon rasped. "If I can sabotage the *Dendra's* dark-out equipment, the patrol will spot us and capture this ship."

"More likely they'll blow it to fragments!" Lianna warned.

His eyes held hers. "I know that, too. But I'm willing to take the chance if you are."

Her gray eyes flashed. "I'm willing, Zarth. The future of the whole galaxy hangs in the balance."

"You stay here," he ordered. "I'll put on this fellow's uniform and helmet and it may give me a little better chance."

In a few minutes, Gordon had struggled into the dead man's black uniform. He jammed on the helmet, then holstered the atom-gun and slid out into the corridor.

The dark-out was still on, the *Dendra* cautiously groping its way through self-induced blackness. Gordon started aft.

HE HAD already, during these past days, located the sound of the dark-out generators as coming from aft on the lower deck. He hastened in the direction of that loud whine.

There was no one in the corridor. During dark-out, every man and officer was at action stations.

Gordon reached the end of the corridor. He hurried down a narrow companionway to the lower deck. Here doors were open, and he glanced into the big drive-generator rooms. Officers stood at flight-panels, men watched the gauges of the big, purring energy-drive.

An officer glanced up surprisedly as Gordon quickly passed the door. But his helmet and uniform seemed to reassure the Cloud-man.

"Of course!" Gordon thought. "The guard I killed would be just returning to his station from locking us up!"

He was now closer to the loud whine of the dark-out generators. They were just

forward of the main drive-machinery rooms, and the door of the dark-out room was also open.

Gordon drew his atom-pistol and stepped into the doorway. He looked into a big room whose generators were emitting that loud whine. One whole side of it was a bank of giant vacuum tubes that pulsed with white radiance.

There were two officers and four men in the room. An officer at the switch-panel beyond the tubes turned to speak to a man, and glimpsed Gordon's taut face in the doorway.

"Zarth Arn!" yelled the officer, grabbing for his gun. "Look out!"

Gordon triggered his pistol. It was the first time he had used one of these weapons, and his ignorance betrayed him.

He was aiming at the vacuum tubes across the room but the gun kicked high in his hand. The exploding pellet blasted the ceiling. He flung himself down in a crouch as a pellet from the officer's pistol flicked across the room. It struck the door-frame above his head, flaring instantly.

"General alarm!" the officer was yelling. "Get—"

Gordon triggered again at that moment. This time he held his weapon down. The atomic pellets from his pistol exploded amid the bank of giant tubes.

Electric fire mushroomed out into the dark-out room! Two men and an officer screamed as raging violet flames enveloped them.

The officer with the gun swung around, appalled. Gordon swiftly shot him. He shot then at the nearest big generator.

His pellet only fused its metal shield. But the giant vacuum tubes were still popping, the whole room an inferno. The two men left there staggered in the violet fires, screaming and falling.

Gordon had recoiled into the corridor. He yelled exultantly as he saw the blackness outside the window suddenly replaced by a vault of brilliant stars.

"Our dark-out has failed!" yelled a voice on one of the upper decks.

Bells shrilled madly. Gordon heard a rush of feet as Cloud-men started pouring

down from an upper deck toward the dark-out room.

CHAPTER XVII

Wrecked in the Nebula

GORDON glimpsed a dozen League soldiers bursting into the farther end of this lower-deck corridor. He knew that his game was up, but he turned his atom-pistol savagely loose upon them.

The pellets flew down the passage and exploded. The little flares of force blasted down half the Cloud-men there. But the others raced forward with wolfish shouts. And his pistol went dead in his hand, its loads exhausted.

Then it happened! The whole fabric of the *Dendra* rocked violently and there was a crash of riving plates and girders. All space outside the ship seemed illuminated by a brilliant flare.

"That Empire cruiser has spotted us and is shelling us!" yelled a wild voice. "We're hit!"

Continued rending crash of parting struts and plates was accompanied by the shrill singing of escaping air. Then came the quick *slam-slam* of automatic bulkheads closing.

The corridor in which Gordon stood was suddenly divided by the automatic doors closing! He was cut off from the men at its end.

"Battle-stations! Space-suits on!" rang Durk Undis' sharp voice from the annunciators throughout the ship. "We're crippled and have to fight it out with that Empire cruiser!"

Bells were ringing, alarms buzzing. Then came the swift shudder of recoil from big atom-guns broadsiding. Far away in space, out there in the vast blackness, Gordon glimpsed points of light suddenly flaring and vanishing.

A duel in space, this! His sudden sabotage of the darkout concealment had exposed the *Dendra* to the Empire cruiser which it had been trying to evade. That cruiser had instantly opened fire.

"Lianna!" Gordon thought wildly. "If

she's been hurt—”

He turned and scrambled up the companionway to the mid-deck.

Lianna came running to meet him in the corridor there. Her face was pale but unafraid.

“There are space-suits in the locker here!” she exclaimed. “Quick, Zarth! The ship may be hit again any moment!”

The girl had kept her head enough to find one of the lockers of space-suits placed at strategic locations throughout the ship.

In their cabin, she and Gordon hastily struggled into the suits. They were of stiffened metallic fabric, with spherical glassite helmets whose oxygenators started automatically when they were closed.

Lianna spoke, and he heard her voice normally by means of the short-range audio apparatus built into each suit.

She cried to him, “That Empire cruiser is going to shell this ship to fragments now that it can’t go dark!”

Gordon was dazed by the strangeness of the scene from the windows. The *Dendra*, maneuvering at high speed to baffle the radar of the other ship, was loosing its heavy atom-shells continuously.*

Far in space, tiny pinpoints of light flared and vanished swiftly. So tremendous was the distance at which this duel was being conducted, that the gigantic flares of the exploding atom-shells were thus reduced in size.

Space again burst into blinding light about them as the Empire cruiser’s shells ranged close. The *Dendra* rocked on its beam-ends from the soundless explosions of force.

GORDON and Lianna were hurled to the floor by the violent shocks. He was aware that the drone of the drive-generators had fallen to a ragged whine. More automatic bulkheads were slamming shut.

“Drive-rooms half wrecked!” came a

*Note: The shells of the big atom-guns used in space battle were self-propelled by jetting the sub-spectrum pressure rays that hurled them many times faster than light.

shout through his space-suit audiophone. “Only two generators going!”

“Keep them running!” rang Durk Undis’ fierce order. “We’ll disable that Empire ship with our new weapon, in a few moments!”

Their new weapon? Gordon swiftly recalled how Shorr Kan had affirmed that the League had a potent new weapon of offense that could strike down any ship.

“Lianna, they’ve got their hands too full to bother with us right now!” Gordon exclaimed. “This is our chance to get away! If we can get off in one of the space-boats, we can reach that Empire ship!”

Lianna did not hesitate. “I am willing to try it, Zarth!”

“Then come on!” he exclaimed.

The *Dendra* was still rocking wildly, and he steadied Lianna as he led the way hastily down the corridor.

The space-suited gunners in the gun-galleries they passed were too engrossed in the desperate battle to glimpse them.

They reached the hatch in whose wall was a closed valve leading to one of the space life-boats attached to the hull. Gordon fumbled frantically for a moment with the valve.

“Lianna, I don’t know how to open this! Can you do it?”

She swiftly grasped the catches, pulled at them. But there was no response.

“Zarth, the automatic trips have locked! That means that the space-boat is wrecked and unusable!”

Gordon refused to let despair conquer him. “There are other space-boats! On the other side—”

The *Dendra* was still rocking wildly, its parting girders cracking and screeching. Shells were still exploding blindingly outside.

But at that moment they heard a fiercely exultant cry from Durk Undis.

“Our weapon has disabled them! Now give them full broadsides!”

Almost instantly came a thin cheer. “We got them!”

Through the porthole beside the hatch, Gordon glimpsed far out there in the void a sudden flare like that of a new nova.

It was no pinpoint of light this time, but a blazing star that swiftly flared and vanished.

"They've destroyed the Empire cruiser somehow!" cried Lianna.

Gordon's heart sank. "But we can still get away if we can get to one of the other space-boats!"

They turned to retrace their way. As they did so, two dishevelled Cloud officers burst into the cross-corridor.

"Get them!" yelled one. They started to draw their atom-pistols from the holsters of their space-suits.

Gordon charged desperately, the heel of the staggering ship hurling him into the two men. He rolled with them on the corridor floor, fiercely trying to wrest a weapon from one.

Then more voices rang loud about him. He felt himself seized by many hands that tore him loose from his antagonists. Hauled to his feet, panting and breathless, Gordon found a half-dozen Cloud-men holding Lianna and himself.

Durk Undis' fierce, flushed face was recognizable inside the glassite helmet of the foremost man.

"You traitor!" he hissed at Gordon. "I told Shorr Kan no spawn of the Empire could be depended on!"

"Kill them both now!" urged one of the raging Cloud-men. "It was Zarth Arn who sabotaged the dark-out and got us into this fix!"

"No, they don't die yet!" snapped Durk Undis. "Shorr Kan will deal with them when we get back to the Cloud."

"If we get back to the Cloud," corrected the other officer bitterly. "The *Dendra* is crippled, its last two generators will barely run, the spaceboats are wrecked. We couldn't make it halfway back."

DURK UNDIS stiffened. "Then we'll have to hide out until Shorr Kan can send a relief ship for us. We'll call him by secret wave and report what has happened."

"Hide out where?" cried another Cloud officer. "This is Empire space! That patrol-cruiser undoubtedly got off a flash

report before we finished it. This whole sector will be searched by Empire squadrons within twenty-four hours!"

Durk Undis bared his teeth. "I know. We'll have to get out of here. And there's only one place to go."

He pointed through a porthole to a brilliant coppery star that shone hotly just a little inside the glowing haze of huge Orion Nebula.

"That copper sun has a planet marked uninhabited on the charts. We can wait there for help. The cursed Empire cruisers won't look long for us if we jettison wreckage to make it appear we were destroyed."

"But the charts showed that that sun and its planet are the center of a dust-whorl! We can't go there!" objected another Cloud-man.

"The whorl will drift us in, and a high-powered relief ship will be able to come in and get back out," Durk Undis insisted. "Head for it with all the speed you can get out of the generators. Don't draw power yet to message Thallarna. We can do that after we're safe on that world."

He added, pointing to Gordon and Lianna, "And tie these two up and keep a man with drawn gun over them every minute, Linn Kyle!"

Gordon and Lianna were hauled into one of the metal cabins whose walls were badly bulged by the damage of battle. They were dumped into two recoil-chairs mounted on rotating pedestals.

Plastic fetters were snapped to hold their arms and legs to the frames of the chairs. The officer Linn Kyle then left them, with a big Cloud-soldier with drawn atom-pistol remaining guard over them.

Gordon managed to rotate his chair by jerks of his body until he faced Lianna.

"Lianna, I thought we had a chance but I've just made things worse," he said huskily.

Her face was unafraid as she smiled at him through her glassite helmet.

"You had to try it, Zarth. And at least, you've thwarted Shorr Kan's scheme."

Gordon knew better. He realizing sinkingly that his attempt to get the *Dendra* captured by Empire forces had been a

complete failure.

Whatever was the new, potent weapon the Cloud-men had used, it had been too much for the Empire cruiser. He had succeeded only in proving to the Cloud-men and Shorr Kan that he was their enemy.

He'd never have a chance now to warn Throon of Corbulo's treachery and the impending attack! He and Lianna would be dragged back to the Cloud and to Shorr Kan's cold retribution.

"By God, not that!" Gordon swore to himself. "I'll make them kill us before I let Lianna be taken back there!"

The *Dendra* throbbed on for hours, limping on its last two generators. Then it cut off power and drifted. Soon the ship was entering the strange glow of the gigantic nebula.

At intervals came ominous cracklings and creakings from many parts of the ship. When a guard came to relieve their watchdog, Gordon learned from the brief talk of the two Cloud-men that only eighteen men remained alive of the officers and crew.

The staggering ship began some hours later to buck and lurch in the grip of strong currents. Gordon realized they must be entering the great dust-whorl in the nebula, to which Linn Kyle had referred.

More and more violent grew the bucking until the *Dendra* seemed shaking itself apart. Then came a loud crash, and a singing sound that lasted for minutes.

"The air has all leaked out from the ship now," Lianna murmured. "Without our space-suits, we'd all be dead."

Death seemed close to John Gordon, in any case. The crippled ship was now in the full grip of the mighty nebula dust-current that was bearing it on toward a crash on the star-world ahead.

Hours passed. The *Dendra* was now using the scant power of its two remaining generators again, to keep from being drawn into the coppery sun they were nearing.

Gordon and Lianna could get only occasional glimpses of their destination, through the porthole. They glimpsed a planet revolving around that copper-colored star—a yellow, tawny world.

Durk Undis' voice rang in a final order.

"Strap in for crash-landing!"

The guard who watched Gordon and Lianna strapped himself into a recoil-chair beside them. Air began to scream through the wreck.

Gordon had a flashing glimpse of weird other forests rushing upward. The generators roared loud in a brief deceleration effort. Then came a crash that hurled Gordon into momentary darkness.

CHAPTER XVIII

Monster Men

GORDON came to himself, dazed and shaken, to find that it was Lianna's anxious voice that had aroused him.

The girl was leaning toward him from the chair in which she was bound. Her face was worried.

"Zarth, I thought for a moment you were really hurt! Your recoil-chair almost broke loose completely."

"I'm all right," Gordon managed to answer. His eyes swung to take in the scene. "We've landed, all right!"

The *Dendra* was no longer a ship. It was now a twisted, wrecked mass of metal whose voyaging was forever ended.

Walls had bulged like paper, metal girders and struts had been shorn away like cardboard, by the impact of the crash. Hot coppery sunlight streamed through a gaping rent in the cabin wall. Through that opening, Gordon could glimpse the scene outside.

The wreck lay amid towering other jungles of strange trees whose broad leaves grew directly from their smooth yellow trunks. Trees and brush and strange shrubs of yellow-and-black flowers had been crushed by the fall of the wreck. Golden spore-dust drifted in the metallic sunlight, and strange webbed-winged birds or creatures flew through the other wilderness.

To Gordon's ears came the ragged hum of atomic turbines and generators, close to them in the wreck.

"Durk Undis' men have been working to start the two generators," Lianna said. "They were not badly damaged, it seems."

"Then they're going to send a call back to the Cloud," Gordon muttered. "And Shorr Kan will send another ship here!"

The officer Linn Kyle came into their cabin, no longer wearing a space-suit.

"You can take the suits off the prisoners," Linn Kyle told their guard. "Keep them fettered in the chairs, though."

Gordon was relieved to get rid of the heavy suit and helmet. He found the air breathable but laden with strange, spicy scents.

Just across the corridor from their prison was the stereo room. They heard a transmitter there soon begin its high-pitched whine. Then the taut voice of Durk Undis reached them.

"Calling headquarters at Thallarna! *Dendra* calling!"

Lianna asked, "Won't their call arouse attention? If it's heard by Empire warships, it will."

Gordon had no hope of that. "No, Durk Undis mentioned a secret wave they would use. No doubt that means they can call Thallarna without being overheard."

For minutes, the calls continued. Then they heard Durk Undis order the transmitter turned off.

"We'll try again," they heard him say. "We've got to keep trying until we reach headquarters."

Gordon hitched his recoil-chair around by imperceptible jerks of his body. He could now look across the shattered corridor into the stereo-room, whose door sagged from its frame.

In there, two hours later, he saw Durk Undis and his operator again try to reach Thallarna with a call. As the generators astern began humming, the operator closed the switches of his transmitter and then carefully centered a series of vernier dials on his panel.

"Be careful to keep exactly on the wave," Durk Undis cautioned. "If the cursed Empire ships get even a whisper of our call, they'll run a direction-fix on it and be here to hunt us."

Then, again, begin the series of calls. And this time, Durk Undis succeeded in

obtaining a response.

"*Dendra* calling, Captain Durk Undis speaking!" he exclaimed eagerly into the transmitter. "I can't go stereo, for lack of power. But here's my identification."

HE UTTERED a series of numbers, evidently a prearranged identification code. Then he rapidly gave the space coordinates of the planet inside the nebula where the wreck lay, and reported the battle and its sequel.

Shorr Kan's ringing voice came from the receiver of the apparatus.

"So Zarth Arn tried to sabotage the mission? I didn't think he was such a fool! I'll send another phantom-cruiser for you at once. Maintain silence until it arrives, for the Empire fleet mustn't suspect you're in their realm."

"I assume that we will not now be continuing the mission to Earth?" said Durk Undis.

"Of course not!" snapped Shorr Kan. "You'll bring Zarth Arn and the girl back to the Cloud. Above all, he mustn't get away to carry any news to Throon!"

Gordon's heart chilled, as he heard. Lianna looked mutely at him.

Durk Undis and the other Cloud-men were jubilant. Gordon heard the fanatic young captain give his orders.

"We'll maintain sentries around the wreck. We don't know what kind of creatures are in these jungles. Linn Kyle, you command the first watch."

Night swept upon the other jungles as the coppery sun sank. The dank breath of the forest became stronger.

The night was like one of wondrously glowing moonlight, for the flaring nebula sky dripped strange radiance upon the brooding jungles and the wreck.

Out of the nebula-illuminated jungle there came a little later the echo of distant cry. It was a throaty, bestial call, but with a creepy human quality in its tones.

Gordon heard Durk Undis' sharp voice. "That must be a beast of some size! Keep your eyes open."

Lianna shivered slightly. "They tell strange tales of some of these lost worlds

in the nebula. Few ships ever dare to enter these dust-whorls."

"Ships are going to enter *this* one, if I can bring it about," muttered Gordon. "We're not going back to the Cloud!"

He had discovered something that gave him a faint hope. The recoil-chair in which he was fettered had suffered like the rest of the wreck from the shock of the crash-landing. The metal frame of the chair was slightly cracked along the arm to which his wrist was fettered.

The crack was a slight one, not affecting the strength of the chair. But it presented a slightly raised and ragged edge. Against this roughened edge, Gordon began secretly rubbing the plastic fetter on his wrist.

Gordon realized the improbability of this small abrasion severing the plastic. But it was at least a possibility, and he kept it up by imperceptible movements until his muscles ached.

Toward morning, they were awakened from doze by a repetition of the weird, throaty call in the distant forests. The next day, and the next, passed as the Cloud-men waited. But on the third night, horror burst upon them.

SOON after nightfall that night, a yell from one of the Cloud-men sentries was followed by the crash of an atom-pistol.

"What is it?" cried Durk Undis.

"Creatures that looked like men—but they *melted* when I fired at them!" cried another voice. "They disappeared like magic!"

"There's another! And more of them!" cried a third Cloud-man. "See!"

Guns went off, the explosion of their atomic pellets rocking the night. Durk Undis yelled orders.

Lianna had swung her chair around on its pedestal, toward the porthole. She cried out.

"Zarth! Look!"

Gordon managed to hitch his chair around also. He stared at the unbelievable sight outside the porthole.

Out there, manlike creatures in scores were pouring out of the jungle toward the

wreck. They looked like tall, rubbery human men. Their eyes were blazing as they charged.

Durk Undis and his men were using their atom-pistols. The blinding flare of the atomic pellets darkened the soft nebula-glow.

But wherever those pellets blasted the strange invaders, the rubbery men simply melted. Their bodies melted down into viscous jelly that flowed back over the ground in slow retreat.

"They're coming from the other side too!" yelled the warning of Linn Kyle.

Durk Undis' voice rang imperatively. "Pistols won't hold them off long! Linn, take two men and start the ship's generators. Hook a jet-cable to them and we can spray these creatures with pressure-rays!"

Lianna's eyes were distended by horror, as they witnessed the rubbery horde seize two of the Cloud-men and bear them back into the jungles.

"Zarth, they are monsters! Not men, yet not beasts—"

Gordon saw that the fight was going badly. The rubbery horde had pressed Durk Undis' men back close against the wreck.

It seemed that the weird attackers could not be harmed. For those who were hit simply melted to jelly and flowed away.

The generators in the wreck began humming loudly. Then Linn Kyle and his two men emerged dragging a heavy cable. At the end of this they had hastily attached one of the pressure-ray jet projectors that ordinarily propelled the ship.

"Use it, quickly!" shouted Durk Undis. "The brutes are too much for us!"

"Stand clear!" yelled Linn Kyle.

He switched on the heavy ray-projector he held. Blinding beams of force leaped from it and cut through the rubbery horde. The ground instantly became a horrible stream of creeping, flowing jelly.

The monstrous attackers sullenly retreated. And the viscous slime upon the ground retreated also toward the shelter of the jungle.

There came then a raging chorus of inhuman, throaty shouts from out in the

ocher forest.

"Quick, rig other jet-projectors!" Durk Undis ordered. "It's all that will keep them off. We need one on each side of the wreck."

"What in the name of all devils *are* the things?" cried Linn Kyle, his voice shrill with horror.

"There's no time for speculating on that!" rapped the other. "Get those projectors ready."

Gordon and Lianna witnessed another attack, a half-hour later. But this time, four jets of pressure-rays met the rubbery horde. Then the attacks desisted.

"They've gone!" sweated a Cloud-man. "But they carried off two of us!"

AS THE generators were turned off, Gordon heard a new sound from the distance.

"Lianna, hear that?"

It was a pulsing, throbbing sound like the deep beat of distant drums. It came from far westward in the nebula-lit jungle.

Then, breaking into the throbbing drum-beat, there came a faint, agonized series of human screams. There swelled up a triumphant chorus of throaty shouts, then silence.

"The two Cloud-men who were captured," Gordon said sickly. "God knows what happened to them out there."

Lianna was pale. "Zarth, this is a world of horror. No wonder the Empire has left it uncolonized."

The menace to themselves seemed doubled, to Gordon. Almost, to assure Lianna's safety from the nightmare terrors of this planet, he would have gone willingly back to the Cloud.

But his determination returned. They'd get away, but not to go back to the hands of Shorr Kan if he could help it!

He forced himself to continue the slow, squirming movements that rubbed his plastic fetter against the rough crack in the chair-frame. Finally in weariness he slept, to awaken hours after dawn.

In the coppery sunlight, the ocher jungles were deceptively peaceful looking. But captives and captors alike knew now what

weird horror brooded out in those golden glades.

Gordon, through the long day, continued to squirm and hitch to increase the abrasion on the fetter. He desisted only when the eyes of their guard were upon him.

Lianna whispered hopefully, "Do you think you can get free?"

"By tonight I should be able to wear it through," he murmured.

"But then? What good will it do? We can't flee out there into the jungle!"

"No, but we can call help," Gordon muttered. "I've thought of a way."

Night came, and Durk Undis gave his men sharp orders. "Two men on each of those jet-projectors, ready to repel the creatures if they come! We'll keep the generators running continuously."

That was welcome news, to Gordon. It made more possible the precarious scheme he had evolved.

He felt that by now the tough plastic must be abraded halfway through. But it still felt too strong to break.

The generators had begun humming. And the worried Cloud-men had not long to wait for the attack they dreaded. Once more from the nebula-illuminated jungles came the weird, throaty shouts.

"Be ready the minute they appear!" called Durk Undis.

With a chorus of throaty cries, the rubbery horde rolled in a fierce wave out of the jungle. Instantly the jet projectors released beams of the powerful pressure-rays upon them.

"It's holding them back! Keep it up!" Durk Undis cried.

"But they don't *die*!" cried another man. "They just melt down and flow away!"

Gordon realized this was his opportunity. The Cloud-men were all engaged out there in defending the wreck, and the generators were running.

He expanded his muscles in an effort to break his fetter. But he had misjudged its strength. The tough plastic held.

Again he tried, straining wildly. This time the fetter snapped. Hastily, he unfastened the other fetters.

He got to his feet and quickly freed

Lianna. Then he hurried across the corridor toward the stereo-room just opposite.

"Watch and warn me if any of the Cloud-men come back in here!" he told the girl. "I'm going to try to start the transmitter."

"But do you know enough about it to send out a call?" asked Lianna.

"No, but if I can start it up, *any* untuned wave will direct instant attention to this planet," Gordon explained swiftly.

He fumbled in the dimness of the room for the switches he had observed the operator use to start the transmitter.

Gordon closed them. The transmitter remained dead. There was no whine of power, no glow of big tubes. A baffled feeling grew in him as he realized the failure of his plan.

CHAPTER XIX

World of Horror

GORDON forced himself to remain calm despite the wild din of struggle outside the wreck. He went over the switches he had seen the operator use to start the transmitter.

He had missed one! As he closed it, the motor-generators in the stereo-room broke into loud life, and the big vacuum tubes began glowing.

"The generators must be failing! Our jets are losing power!" came a cry from one of the Cloud-men outside the wreck.

"Zarh, you're drawing so much power from the two generators that it's cutting their ray-jets!" warned Lianna. "They'll be in here to find out what's wrong!"

"I only need a moment!" Gordon sweated, bending tensely over the bank of vernier dials.

It was impossible, he knew, for him to try sending any coherent message. He knew almost nothing about this complicated apparatus of future science.

But if he could send out any kind of untuned signal, the very fact of such a signal coming from a supposedly uninhabited planet would surely arouse the suspicion of the Empire cruisers searching out there.

Gordon spun the verniers at random. The equipment sputtered, hummed and faltered, beneath his ignorant handling.

"The brutes are getting through!" Durk Undis' voice yelled. "Linn, get in there and see what's wrong with the generators!"

The battle outside was closer, fiercer. Lianna uttered a cry of warning.

Gordon whirled around. Linn Kyle stood, wild and dishevelled, in the door of the stereo-room.

The Cloud-man uttered an oath and grabbed out his atom-pistol. "By God, I might have known—"

Gordon dived for him, tackled him and brought him to the floor with a crash. They struggled furiously.

Through the increasing din, Gordon heard Lianna's horror-laden scream. And he glimpsed weird figures pouring into the room from astern and seizing the terrified girl.

The rubbery attackers! The spawn of this crazy nebula world had broken through Durk Undis' weakened defenses and were inside the wreck!

"Lianna!" Gordon yelled hoarsely, as he saw the girl borne swiftly from her feet by clutching hands.

The blank faces, the ghastly eyes of the rubbery aliens were close to him as he tore free from Linn Kyle and tried to rise.

He couldn't! The rubbery bodies were piling on him and on the Cloud-man. Arms that felt like tentacles grasped and lifted them. Linn Kyle's wild shot hit one and it melted to crawling jelly, but the others seized the Cloud-man.

Crash of atom-pistols thundered through the corridors of the wreck. Durk Undis' high voice rang over the wild uproar.

"Drive them out of the ship and hold the doors until we can get the ray-jets going again!"

Gordon heard Linn Kyle's yell choked off in his throat as he himself and the Cloud-man were swung swiftly up off their feet. The rubbery horde was retreating out of the shattered stern of the wreck, and were taking the two and Lianna with them.

Gordon fought to free himself of the

clutching rubbery arms, and couldn't. He realized with horror that his weakening of the Cloud-men's defense to send his desperate call had exposed Lianna and himself to a more ghastly peril.

"Durk, they have us!" screeched Linn Kyle. Through the crash of guns and yells, Gordon heard the other's startled cry.

BUT they were out of the wreck now, and their captors were bounding with them through the towering jungle. The whole rubbery horde was retreating into the nebula-lit forest as Durk Undis and his remaining men got their ray-jets in action again.

Gordon's senses swam. These hideous captors hurtled through the jungle with him like preternaturally agile apes. Lianna and Linn Kyle were borne along as swiftly. Down from the flaming nebula sky dripped a glowing radiance that silvered the unearthly forest.

The pace of their strange captors quickened, after some minutes of travel through the jungle. Now rock slopes began to lift from the thick forest.

The weird horde swept with them into a deep stony gorge. It was a place more awesome than the jungle. For its rock cliffs gleamed with a faint light that was no reflection of the nebula sky, but was intrinsic.

"Radioactive, those cliffs," Gordon thought numbly. "Maybe it explains these unholy freaks—"

Speculation was swept from his mind by the hideous clamor that arose. There were hordes of the rubbery creatures here in the gorge. They greeted the captives with throaty, deafening cries.

Gordon found himself held tightly beside Lianna. The girl's face was deathly white.

"Lianna, you're not hurt?"

"Zarth, no! But what are they going to do to us?"

"My God, I don't know!" he husked.

"They had some reason for taking us alive."

The quasi-human horde had seized on Linn Kyle! They were stripping all cloth-

ing off the Cloud-man's body.

Throaty clamor like the applause of an infernal audience rose loudly as Linn Kyle was now borne forward. Rubbery creatures squatting on the ground beat it with their limbs in a drumming rhythm.

Linn Kyle, struggling wildly, was carried quickly on down the gorge. Then as the horde parted to permit his passage, Gordon glimpsed where they were bearing the Cloud-man.

At the center of the gorge, ringed by faintly glowing radioactive rocks, lay a sunken pool twenty yards across. But it was not a pool of water, but of *life*!

A great, twitching, crawling mass of jelly-like life, heaving and sucking beneath the light of the flaring nebula-sky.

"What is it?" cried Lianna. "It looks living!"

The final horror assaulted Gordon's reeling mind. For now he saw the things around the edges of the pool.

Little jelly-like things like miniature human bodies *budded* out of that mass of viscous life! Some were attached to the main mass by mere threads. One broke free in that moment and came walking uncertainly up the bank.

"God in Heaven!" he whispered. "These creatures come from the pool of life. They're *born* from it!"

Linn Kyle's screams ripped the din of throaty shouts and drumming rhythm. The rubbery creatures who held the Cloud-man tossed his naked body out into the viscous pool!

The Cloud-man screamed again, horribly. Gordon turned aside his gaze, retching.

When he looked again, Linn Kyle's body was engulfed by the viscous jelly that swirled hungrily over it. In a few moments the Cloud-man was gone, absorbed into the pool of life.

"Lianna, don't look!" Gordon cried hoarsely.

HE MADE a mad attempt to free himself. He might as well have been a child in the grasp of those rubbery arms.

But his attempt drew attention to him-

self. The creatures began to tear away his clothing. He heard Lianna's smothered cry.

Crash of atom-pistols thundered through the infernal din of drumming and shouting! Pellets exploded in blinding fire amid the swarming horde. Rubbery creatures staggered, fell, melted into crawling jelly that promptly flowed back toward the pool!

"Durk Undis!" yelled Gordon. He had glimpsed the young Cloud-captain's narrow face and blazing eyes, forcing through the horde at the head of his men.

"Get Zarth Arn and the girl, quick!" yelled Durk Undis to his men. "Then back to the wreck!"

Gordon almost admired the ruthless young fanatic, at that moment. Durk Undis had been ordered by Shorr Kan to bring Gordon back to the Cloud, and he'd carry out that order or die trying.

The monstrous horde swirled in crazy uproar, momentarily stunned by the unexpected attack. Gordon wrenched free from the two creatures who still held him. He reached Lianna's side.

It was a crazy chaos of whirling, quasi-human figures and exploding atom-pellets, of Durk Undis' yells and the throaty uproar of the horde.

As the bewildered horde fell back for a moment, Durk Undis and his men blasted the last creatures still around Lianna and Gordon. Next moment, with Gordon and the half-senseless girl in their midst, the Cloud-men hastily retreated back out of the gorge.

"They're coming after us!" yelled one of the men beside Gordon.

Gordon perceived that the ghastly horde had recovered presence of mind. With a hideous throaty clamor, the unhuman mob crashed into the jungle in pursuit.

They made half the distance back to the wreck of the *Dendra*, before the jungle ahead of them swarmed also with the creatures.

"They're all around us—have cut us off!" Durk Undis exclaimed. "Try to fight through!"

It was hopeless and he knew it, and Gordon knew it. A dozen atom-pistols

couldn't hold off that mindless horde for long.

Gordon stood with Lianna behind him, using a clubbed branch he tore from a fallen tree as a bludgeon against the swarming, rubbery attackers. With it, he could at least kill Lianna before they dragged her back to that ghastly pool of life!

The whole nightmare fight was suddenly shadowed by a big black mass dropping down on them from the flaming nebula sky!

"It's a ship!" screamed one of the Cloud-men. "One of *our* ships!"

A PHANTOM-CRUISER with the black, blotlike insignia of the Cloud on its bows thundered down upon them with krypton searchlights flaring to light the whole scene.

The rubbery horde retreated in sudden panic. As the cruiser crushed to a landing in the jungle close by, Cloud-soldiers with atom-guns sprang from it.

Gordon, raising Lianna's half-senseless form from the ground, found Durk Undis covering him with an atom-pistol. The newcomers were hastily approaching.

"Holl Vonn!" Durk Undis greeted the stocky, crophaired Cloud-captain who was foremost. "You got here just in time!"

"So it seems!" exclaimed Holl Vonn, staring horrifiedly at the viscous living jelly still creeping away from the scene of battle. "What in God's name were those things that were attacking you?"

"They're creatures of this crazy planet," Durk Undis panted. "I think they were human once—human colonists who mutated under radioactive influence. They've got a strange new reproduction-cycle, being born from a pool of life and going back to it when hurt to be born again."

He continued swiftly. "That can be told later. The thing now is to get away from here at once. There must already be Empire squadrons searching the whole area west of the nebula."

Holl Vonn nodded quickly. "Shorr Kan said to bring Zarth Arn and Lianna back to the Cloud at once. We'd better run eastward through the nebula and then beat back southward along the Rim."

Gordon had revived Lianna. She was looking wonderingly at the towering ship and the armed Cloud-men.

"Zarth, what happened? Does this mean—"

"It means that we're going back to the Cloud, to Shorr Kan," he said hoarsely.

Durk Undis motioned curtly to the new Cloud-ship. "Into the *Meric*, both of you."

Holl Vonn suddenly stiffened. "Listen—*by Heaven!*"

His square face was suddenly livid as he pointed wildly upward.

Four massive shapes were rushing down on them from the nebula-sky! Not phantoms these, but big cruisers with heavy batteries of atom-guns along their sides and with the flaring comet-emblem of the Mid-Galactic Empire on their bows.

"*An Empire squadron!*" yelled Holl Vonn wildly. "We're trapped here! They've already spotted us!"

Gordon felt sudden wild hope. His desperate expedient had succeeded, had brought one of the searching Empire squadrons to this world!

CHAPTER XX

Doom Off the Pleiades

DURK UNDIS uttered a raging exclamation as the Empire cruisers swooped from the sky.

"To the ship! We'll cut our way back through them to space!"

"We've not a chance!" cried Holl Vonn, his face deathly as he started to run toward his ship. "They've caught us flat!"

Durk Undis froze for a second, then whipped out his atom-pistol again. He whirled around toward Gordon and Lianna.

The young fanatic's eyes were flaming. "Then we'll finish Zarth Arn and Lianna right here! Shorr Kan's orders—no matter what happens to us, these two must not get back to Throon!"

Gordon lunged at him as he spoke! In the few seconds since the Empire cruisers had appeared, Gordon had realized that in this desperate emergency the Cloud-men would kill himself and Lianna rather than

let them escape.

He had bunched himself an instant before Durk Undis swung around with the weapon. He hit the Cloud-man like a human projectile. Durk Undis was hurled violently backward.

Holl Vonn was running into his ship, shouting orders. As Durk Undis sprawled, Gordon seized Lianna's hand and darted with her into the concealment of the nebula-lit jungle.

"If we can keep out of it for a few moments, we're saved!" he told her. "Those Empire ships will come down here to search."

"Holl Vonn is charging them!" cried Lianna, pointing upward.

Thunderous roar of generators screaming with power broke upon the air as the long, slim mass of Holl Vonn's phantom, the *Meric*, hurtled up into the glowing sky.

Gordon saw then that whatever else the men of the Cloud might be, they were not cowards. Knowing himself trapped, knowing instant destruction was the penalty for being caught here in Empire space after the destruction of an Empire ship, Holl Vonn came out fighting!

Atom-guns of the *Meric* volleyed exploding shells at the swooping Empire ships. The nebula sky seemed to burst into blinding brilliance with the explosions.

It was magnificent but hopeless, that charge of one phantom against four heavy cruisers. The great batteries of the cruisers seemed literally to smother the *Meric* in atom-shells.

Blossoming flowers of atomic fire unfolded and momentarily concealed the Cloud ship. Then it was revealed as a fusing, fiery wreck that hurtled headlong across the sky to crash in the distant jungle.

"Zarth, look out!" screamed Lianna at that instant, and pushed Gordon aside.

An atomic pellet flicked close past his face and exploded in a nearby thicket!

Durk Undis, his face deadly, was close by and was raising his weapon to fire again. Lianna had desperately grasped his arm.

Gordon realized then the tenacity of the young Cloud-captain, who had remained and followed to kill Lianna and himself.

"By Heaven, I'll finish it now!" Durk Undis was exclaiming, hurling Lianna violently away from him with a sweep of his arm.

Gordon, charging, reached him at that moment. The Cloud-man uttered a sound of sudden agony as Gordon fiercely twisted his arm.

The atom-pistol dropped from his fingers. Eyes blazing, he kned Gordon in the stomach and smashed hard fists into his face.

Gordon hardly felt the blows, in his overpowering passion. He rocked forward and fell with the Cloud-man as they grappled.

BRACED with his back against the trunk of a towering golden tree, Durk Undis got his hands on Gordon's throat and squeezed.

Gordon felt a roaring in his ears, and a sudden blackness swept over him. His groping hands grabbed the Cloud-man's bristling black hair. He hammered Durk Undis' head violently back against the tree.

He was so deep in that roaring blackness that it was only after many minutes that Lianna's voice penetrated his ears.

"Zarth, it's over! He's dead!"

Gordon, gulping air into starved lungs, felt his senses clearing. He found himself still gripping Durk Undis' hair.

The whole back of the Cloud-man's skull was a bloody mess where he had hammered it again and again against the tree-trunk.

He staggered up to his feet, sick, almost retching. Lianna sprang to his side as he swayed.

"Lianna, I didn't see him. If you hadn't cried out and rushed him, he'd have killed me."

A stern new voice rang suddenly from close by. Gordon staggered around to face that direction.

Gray-uniformed Empire soldiers with raised atom-guns were forcing through the soft-lit jungle toward them. One of the Empire cruisers had landed nearby, while the others still hovered overhead.

The man who spoke was a hard-eyed, handsome young Empire captain who

stared wonderingly at Gordon's dishevelled figure and Lianna.

"You two don't look like Cloud-people! But you were with them—"

He stopped suddenly and took a step forward. His eyes peered at Gordon's bruised, bloody face.

"*Prince Zarth Arn!*" he cried, stupefied. Then his eyes flamed hatred and passion. "By Heaven, we've caught you! And with Cloud-men! You joined *them* when you fled from Throon!"

A quiver of passion ran through all the Empire soldiers who had gathered. Gordon saw mortal hatred in their eyes.

The young captain stiffened. "I am Captain Dar Carrul of the Empire navy and I arrest you for the assassination of the late Emperor and for treason!"

Gordon, dazed as he was, found his voice at that. "I didn't murder Arn Abbas! And I didn't join the Cloud—I was held prisoner by these Cloud-men and only just escaped before you came!"

He pointed at the corpse of Durk Undis. "*He* tried to kill me before letting me escape! And what brought you to this planet searching? An untuned signal-wave from here, wasn't it?"

Dar Carrul looked startled. "How did you know that? Yes, it is true that our operators detected such a signal coming from this uninhabited world, when we were searching space west of the nebula."

"Zarth sent that signal!" Lianna told him. "He used that method to attract Empire ships here!"

Dar Carrul looked a little bewildered. "But everyone *knows* you killed your father! Commander Corbulo saw you do it! And you fled from Throon—"

"I didn't flee, I was carried off," Gordon declared. He cried earnestly, "All I ask is to be taken to Throon to tell my story!"

Dar Carrul seemed more and more perplexed by the unexpected turn of the situation.

"You will certainly be taken to Throon for trial," he told Gordon. "But it is not for a mere squadron captain to handle such a grave matter as this one. I will take you under guard to our main squadron and re-

port for instructions."

"Let me talk at once by stereo to my brother, to Jhal Arn!" pleaded Gordon tautly.

DAR CARRUL'S face tightened. "You are a proclaimed fugitive, charged with the gravest of crimes against the Empire. I cannot allow you to send messages. You must wait until I receive instructions."

He made a gesture, and a dozen soldiers with drawn atom-guns stepped forward around Gordon and Lianna.

"I must ask you to enter our ship at once," the young captain said clippedly.

Ten minutes later, the cruiser took off from the nebula-world of horror. With the other three Empire cruisers, it raced out westward through the vast glow of Orion Nebula.

In the cabin in which they two had been placed under guard, Gordon paced furiously to and fro.

"If they'd only let me tell Jhal Arn of the danger, of Corbulo's treachery!" he rasped. "If that has to wait till we're taken to Throon, it might be too late!"

Lianna looked worried. "Even when we get to Throon, it may not be easy to convince Jhal Arn of your innocence, Zarth."

Gordon's taut anger was chilled by that. "But they've *got* to believe me! They surely won't credit Corbulo's lies when I tell them the truth?"

"I hope not," Lianna murmured. She added with a flash of pride, "I will corroborate your story. And I am still princess of Fomalhaut Kingdom!"

Hours seemed to drag as the cruisers hurtled headlong out of Orion Nebula, and on westward through open space.

Lianna slept exhaustedly after a time. But Gordon could not sleep. His every nerve seemed taut as he sensed the approaching climax of the gigantic galactic game in which he had been but a pawn.

He *must* convince Jhal Arn of the truth of his story! And he must do so quickly, for as soon as Shorr Kan learned that he had escaped to tell the truth, the master of the Cloud would act swiftly.

Gordon's head ached. Where would it all end? Was there any real chance of his clearing up this great tangle and getting to Earth for the re-exchange of bodies with the real Zarth Arn?

Finally the cruisers decelerated. Orion Nebula was now a glow in the starry heavens far behind them. Close ahead lay the shining cluster of suns of the Pleiades. And near the Pleiades' famous beacon-group there stretched a far-flung echelon of tiny sparks.

The sparks were ships! Warships of the Mid-Galactic Empire's great navy cruising here off the Pleiades, one of the many mighty squadrons watching and warding the Empire's boundaries!

Lianna had awakened. She looked out with him as the cruiser slowly moved past gigantic battleships, columns of grim cruisers, slim phantoms and destroyers and scouts.

"This is one of the main battle-fleets of the Empire," she murmured.

"Why are we being kept here, instead of letting us give our warning?" sweated Gordon.

Their cruiser drew up alongside a giant battleship, the hulls grating together. They heard a rattle of machinery.

Then the cabin door opened and young Dar Carrul entered. "I have received orders to transfer you at once to our flagship, the *Ethne*."

"But let us talk first by stereo to Throon, to the Emperor!" Gordon cried. "Man, what we have to tell may save the whole Empire from disaster!"

Dar Carrul shook his head curtly. "My orders are that you are to send no messages but are to be transferred immediately. I presume that the *Ethne* will take you at once to Throon."

GORDON stood, sick with disappointment and hope delayed. Lianna plucked his arm.

"It won't take long for that battleship to reach Throon, and then you'll be able to tell," she encouraged.

The two went with guards around them down through the cruiser to a hatchway.

From it a short tubular gangway had been run to the battleship.

They went through it under guard of soldiers from the battleship. Once inside the bigger ship, the gangway was cast off and the airlock closed.

Gordon looked around the vestibule chamber at officers and guards. He saw the hatred in their faces as they looked at him. They too thought him assassin of his father, traitor to the Empire!

"I demand to see the captain of this battleship immediately," he rasped, to the lieutenant of guards.

"He is coming now," answered the lieutenant icily, as a tramp of feet came from a corridor.

Gordon swung toward the newcomers, with on his lips a fiery request to be permitted to call Throon. He never uttered it.

For he was looking at a stocky, uniformed figure, a man whose grizzled, square face and bleak eyes he knew only too well.

"Corbulo!" he cried.

Commander Corbulo's bleak eyes did not waver as his harsh voice lashed out at Gordon.

"Yes, traitor, it is I. So you two have been caught at last?"

"You call *me* traitor!" Gordon choked. "You yourself, the greatest traitor in all history—"

Chan Corbulo turned coldly toward the tall, swarthy Arcturian captain who had entered with him and was glaring at Gordon.

"Captain Marlann, there is no need to take this assassin and his accomplice to Throon for trial. I *saw* them murder Arn Abbas! As Commander of the Empire fleet, I adjudge them guilty by space-law and order them executed immediately!"

CHAPTER XXI

Mutiny in the Void

GORDON'S mind rocked to disastrous realization. As he stared frozenly into Chan Corbulo's grim, triumphant face, he understood what had happened.

As Commander of the Empire navy, Corbulo had received the report of the capture of Gordon and Lianna. The arch-traitor had known that he must not let Gordon return to Throon with what he knew. So he had swiftly come here and ordered the two captives brought aboard his own flagship, to do away with them before they could tell what they knew.

Gordon looked wildly around the circle of officers. "You've got to believe me! I'm no traitor! It was Corbulo himself who murdered my father and who is betraying the Empire to Shorr Kan!"

He saw hard, cold unbelief and bitter hatred in the officers' faces. Then Gordon recognized one familiar face.

It was the craggy red face of Hull Burrel, the Antarian captain who had saved him from the Cloud-raiders on Earth. He remembered now that for that, Hull Burrel had been promoted aide to the Commander.

"Hull Burrel, you surely believe me!" Gordon appealed. "You know that Shorr Kan tried to have me kidnapped before."

The big Antarian scowled. "I thought then he did. I didn't know then you were secretly in league with him, that all that was just pretense."

"I tell you, it wasn't pretense!" Gordon cried. "You've all let Corbulo pull the wool over your eyes."

Lianna, her gray eyes blazing in her white face, added, "Zarth speaks the truth! Corbulo *is* the traitor!"

Chan Corbulo made a brusque gesture. "We've had enough of these wild lies. Captain Marlann, see that they are locked out into space at once. It's the most merciful manner of execution."

The guards stepped forward. And then, as Gordon felt the bitterness of despair, he glimpsed the satisfied smirk in Corbulo's eyes and it stung him to a final desperate effort.

"You're letting Corbulo make fools of you all!" he raged. "Why is he so set on executing us instantly, instead of taking us to Throon for trial? Because he wants to silence us! We know too much!"

At last, Gordon perceived that he had made a little impression on the officers.

Hull Burrel and others looked a little doubtful.

The Artarian glanced questioningly at Corbulo. "Commander, I beg you will pardon me if I'm overstepping my position. But perhaps it *would* be more regular to take them to Throon for trial."

Val Marlann, the swarthy Arcturian captain of this battleship, supported Hull Burrel. "Zarth Arn is one of the royal family, after all. And the princess Lianna is a ruler in her own right."

Lianna said swiftly, "This execution means that Fomalhaut Kingdom will break its alliance with the Empire, remember!"

Chan Corbulo's square face stiffened in anger. He had been confident that Gordon and Lianna were on the brink of death, and this slight hitch irritated him.

His irritation made Corbulo do the wrong thing. He tried to ride roughshod over the objections just advanced.

"There is no need to take black traitors and assassins to Throon!" he snapped. "We will execute them at once. Obey my orders!"

Gordon seized on that opportunity to make a flaming appeal to the gathered officers.

"You see? Corbulo will *never* let us go to Throon to tell what we know! Has he even reported our capture to the Emperor?"

Hull Burrel, with gathering trouble on his craggy face, looked at a young Earthman officer.

"You are communication-officer, Verlin. Has any report of Zarth Arn's capture been made to the Emperor?"

Corbulo exploded in rage. "Burrel, how dare you question my conduct? By God, I'll break you for this!"

THE young Earthman, Verlin, looked uncertainly at the raging Commander. Then he hesitantly answered Hull Burrel's question.

"No report of any kind has been made to Throon. The Commander ordered me to make no mention of the capture yet."

Gordon's voice crackled. "Doesn't that at least make you *doubt*?" he cried to the frowning officers. "Why should Corbulo

keep my capture secret from my brother? It's because he knows Jhal Arn would order us brought to Throon for judgment, and he doesn't want that!"

And Gordon added passionately, "We do not ask for any pardon, for any clemency. If I'm guilty, I deserve execution. All I ask is to be taken to Throon for trial. If Corbulo persists in refusing that, it can only be because he is the traitor I say he is!"

Faces changed expression. And Gordon knew that he had finally awakened deep doubt in their minds.

"You're throwing away the Empire fleet if you let this traitor command it!" he pressed. "He's in league with Shorr Kan. Unless you let me go to Throon to prove that, the fleet and Empire are doomed!"

Hull Burrel looked around his fellow officers, and then at Chan Corbulo. "Commander, we mean no disrespect. But Zarth Arn's demand for a trial is reasonable. He should be taken to Throon."

A low chorus of supporting voices came from the other officers. Deep ingrained as was their discipline, deeper still was the doubt and the fear for the Empire that Gordon had awakened.

Corbulo's face flared dull red with fury. "Burrel, you're under arrest! By God, you'll take the space-walk with these two for your insubordination! Guards, seize him!"

Tall, swarthy Captain Val Marlann stepped forward and intervened.

"Wait, guards! Commander Corbulo, you are supreme officer of the Empire fleet but I am captain of the *Ethne*. And I agree with Burrel that we cannot summarily execute these prisoners."

"Marlann, you're captain of the *Ethne* no longer!" raged Corbulo. "I hereby remove you and take personal command of this ship."

Val Marlann stiffened in open defiance as he rasped an answer.

"Commander, if I'm wrong I'm willing to take the consequences. But by God, something about all this *does* smell to Heaven! We're going to Throon and find out what it is!"

Gordon heard the mutter of agreement from the other officers. And Chan Corbulo heard it also.

The baffled rage on his grizzled face deepened, and he uttered a curse.

"Very well, then—to Throon! And when I get through with you at the courts-martial there, you'll wish you'd remembered your discipline. Insubordination in high space! Just wait!"

And Corbulo turned angrily and shouldered out of the room, going forward along a corridor.

Burrel and the other officers looked soberly at each other. Then Val Marlann spoke grimly to Gordon.

"Prince Zarth, you'll get the trial at Throon you asked for. And if you've not told the truth, it's our necks."

"It must be the truth!" Hull Burrel declared. "I never could understand why Zarth Arn should murder his own father! And why would Corbulo be so wild to execute them if the commander had nothing to hide?"

AT THAT moment, from the annunciators throughout the ship, broke a loud voice

"Commander Corbulo, to all hands! Mutiny has broken out on the *Ethne*! Captain Val Marlann and his chief officers, my aide Hull Burrel, and Prince Zarth and Princess Lianna are the ringleaders! All loyal men arm and seize the mutineers!"

Hull Burrel's blue eyes flashed an arctic light. "He's raising the ship against us! Val, get to the annunciators and call off the men! You can convince them!"

The officers plunged for the corridors leading up into the interior of the mighty battleship.

Gordon cried, "Lianna, wait here! There may be fighting!"

Then, as he ran with Hull Burrel and the others through the corridors, they heard a growing uproar somewhere ahead.

The great battleship was suddenly in chaos, alarm bells ringing, voices yelling from the annunciators, feet pounding through the corridors.

The spacemen who had rushed to obey

the supreme commander's order were now bewildered by a clash of authority. Some, who tried to obey and arrest Val Marlann and his officers, were instantly attacked by those of their own comrades who remained loyal to the ship's captain.

In most of the ship, the crew had not had time to arm. Improvised metal clubs and fists took the place of atom-pistols. Battle joined and raged swiftly in crew-rooms, in gun-galleries, in corridors.

Gordon and Hull Burrel found themselves with Val Marlann in the midst of a seething, battling mob in the main mid-deck corridor.

"I've got to get through to an annunciator switchboard!" cried Val Marlann. "Help me crash through them!"

Gordon and the big Antarian, with Verlin, the young communication officer, joined him and plunged into the crazy fight.

They got through, but left big Hull Burrel battling a knot of spacemen back in the mob.

Val Marlann yelled into the annunciator switchboard. "Captain Marlann to all hands! Cease fighting! The announcement of mutiny was a fake, a trick! Obey me!"

Verlin grabbed Gordon's arm as a distant whine of power reached their ears over the din.

"That's the stereo-transmitter going!" the young communication officer cried to Gordon. "Corbulo must be calling for help from the other ships of the fleet!"

"We've got to stop *that*!" Gordon cried. "Lead the way!"

The raced forward along a corridor, then

They raced forward along a corridor, then cross-ship and up a companionway to the top deck.

Val Marlann's orders thundering from the annunciators seemed to be rapidly quieting the uproar in the ship. Its crew knew his voice better than any other. Long habit brought them to obey.

Verlin and Gordon plunged into a big, crowded stereo-room whose tubes and motor-generators were humming. Two bewildered-looking technicians were at the control panel.

Chan Corbulo, an atom-pistol gripped in

his hand, stood on the transmitter-plate speaking loudly and rapidly.

"—command all nearby battleships to send boarding parties aboard the *Ethne* at once to restore order! You will arrest—"

Corbulo, from the tail of his eye, saw the two men burst into the room. He swung swiftly around and triggered his pistol.

The pellet that flew from it was aimed at Gordon. But Verlin, plunging ahead, took it full in his breast.

Gordon tripped headlong over the falling body of the young Earthman. That stumble made Corbulo's quick second shot flick just over Gordon's head.

AS HE fell, Gordon had hurled himself forward. He tackled Corbulo's knees and brought him crashing to the floor.

The two technicians ran forward and hauled Gordon off the Commander. But their grip on him relaxed when they glimpsed his face.

"Good God, it's Prince Zarth Arn!" one of them cried.

Instinctive respect for the ruling house of the Empire confused the two men. Gordon wrenched free from them and grabbed for the pistol in Verlin's holster.

Corbulo had regained his feet, on the other side of the room. He was again raising his weapon.

"You'll never go to Throon!" he roared. "By—"

Gordon shot, from where he crouched on the floor. The atomic pellet, loosed more by guess than by aim, hit Corbulo's neck and exploded. It flung him backward as though a giant hand had hit him.

Val Marlann and Hull Burrel came bursting into the stereo-room with other officers. The whole great ship seemed suddenly quiet.

Marlann bent over Corbulo's blasted body. "Dead!"

Hull Burrel, panting, his face flaming, told Gordon grimly, "We've killed our Commander. God help us if your story is not true, Prince Zarth!"

"It's true—and Corbulo was only one of a score of traitors in Shorr Kan's hire," Gordon husked, shaken with reaction. "I'll

prove it all at Throon."

The image of a dark, towering Centaurian battleship captain suddenly appeared on the receiver-plate of the stereo.

"Vice-Commander Ron Giron calling from the *Shaar*! What the devil is going on aboard the *Ethne*? We're coming alongside to board you as Commander Corbulo ordered."

"No one will board this ship!" Val Marlann answered swiftly. "We're going at once to Throon."

"What does this mean?" roared the vice-commander. "Let me speak to Commander Corbulo himself!"

"You can't—he's dead," clipped Hull Burrel. "He was betraying the fleet to the Cloud. At Throon, we'll prove that."

"It is mutiny, then?" cried Ron Giron. "You'll stand by for boarding parties and consider yourselves under arrest, or we'll open fire!"

"If you fire on the *Ethne*, you'll destroy the Empire's only chance to foil Shorr Kan's plot!" cried Val Marlann. "We've staked our lives on the truth of what Prince Zarth Arn has told us, and we're taking him to Throon."

John Gordon himself stepped forward to make an appeal to the glaring vice-commander.

"Commander Giron, they're telling you the truth! Give us this chance to save the Empire from disaster!"

Giron hesitated. "This is all insane! Corbulo dead and accused of treachery, Zarth Arn returned—"

He seemed to reach decision. "It's beyond me but they can sift it at Throon. To make sure that you go there, four battleships will escort the *Ethne*. They'll have orders to blast you if you try to go anywhere but Throon!"

"That's all we ask!" Gordon cried. "One more word of warning! A League attack may come at any time now. I *know* it is coming, and soon."

Commander Giron's towering figure stiffened. "The devil you say! But we've already taken all possible dispositions. I'll call the Emperor and report all this to him."

The image disappeared. Through the portholes, they saw four big battleships move up and take positions on either side of the *Ethne*.

"We start for Throon at once," Val Marlann said swiftly. "I'll give the orders."

As the officer hurried out, and annunciators and bells started buzzing through the ship, Gordon asked a question.

"Am I to consider myself still a prisoner?"

"Blazes, no!" Hull Burrel exclaimed. "If you've told us the truth, there's no reason to keep you a prisoner. If you haven't told the truth, then we're due for court-martial and execution anyway!"

Gordon found Lianna in the corridor, hurrying in search of him. He told her rapidly what had happened.

"Corbulo dead? One great danger removed!" she exclaimed. "But Zarth, now our lives and the Empire's fate depend on whether we can prove to your brother that our story is true!"

At that moment the mighty *Ethne* began to move ponderously through the void, as its great turbines roared loud.

In a few minutes, the big battleship and its four grim escorts were hurtling headlong across the starry spaces toward Throon.

CHAPTER XXII

Galactic Crisis

HUGE, glaring white Canopus flared in the star-sown heavens in blinding splendor, as the five great battleships rushed toward it at rapidly decreasing speed.

Once again, John Gordon looked from a ship's bridge at the glorious capital sun of the Empire and its green, lovely world. But how much had happened since first he had come to Throon!

"We dock at Throon City in two hours," Hull Burrel was saying. And he added grimly, "There'll be a reception committee waiting for us. Your brother has been advised of our coming."

"All I ask is a chance to prove my

story to Jhal," declared Gordon. "I'm sure I can convince him."

But, inwardly, he had a sickening feeling that he was *not* entirely sure. It all depended on one man, and on whether Gordon had correctly judged that man's reactions.

All the hours and days of the headlong homeward flight across the Empire, Gordon had been tortured by that haunting doubt. He had slept but little, had scarcely eaten, consumed by growing tension.

He *must* convince Jhal Arn! Once that was done, once the last traitor was rooted out, then the Empire would be ready to meet the Cloud's attack. His, John Gordon's, duty would be fulfilled and he could return to Earth for his re-exchange of bodies with the real Zarth Arn. And the real Zarth could come back to help defend the Empire.

But Gordon felt an agony of spirit every time he thought of that re-exchange of bodies. For on that day when he returned to his own time, he would be leaving Lianna forever.

Lianna came into the wide bridge as he thought of her. She stood beside him with her slim fingers clasping his hand encouragingly as they looked ahead.

"Your brother will believe you, Zarth—I know he will."

"Not without proof," Gordon muttered. "And only one man can prove my story. Everything hinges on whether or not he has heard of Corbulo's death and my return, and has fled."

That tormenting uncertainty deepened in him as the five big battleships swung down toward Throon City.

It was night in the capital. Under the light of two hurtling moons glimmered the fairylike glass mountains and the silver sea. The shimmering towers of the city rose boldly in the soft glow, a pattern of lacy light.

The ships landed ponderously in docks of the naval spaceport. Gordon and Lianna, with Hull Burrel and Captain Val Marlann, emerged from the *Ethne* to be met by a solid mass of armed guards.

Two officers walked toward them, and

with them came Orth Bodmer, the Chief Councillor. Bodmer's thin face was lined with deep worry as he confronted Gordon.

"Highness, this is a sorry homecoming!" he faltered. "God send you can prove your innocence!"

"Jhal Arn has kept our return and what happened out there off the Pleiades, a secret?" Gordon asked quickly.

Orth Bodmer nodded. "His Highness is waiting for you now. We are to go at once to the palace by tubeway. I must warn you that these guards have orders to kill instantly if any of you attempt resistance."

They were swiftly searched for weapons, and then led toward the tubeway. Guards entered the cars with them. They had seen on one else, the whole spaceport having been cleared and barred off.

It seemed a dream to John Gordon as they whirled through the tubeway. Too much had happened to him, in too short a time. The mind couldn't stand it. But Lianna's warm clasp of his hand remained a link with reality, nerving him for this ordeal.

IN THE great palace of Throon, they went up through emptied corridors to the study in which Gordon had first confronted Arn Abbas.

Jhal Arn sat now behind the desk, his handsome face a worn mask. His eyes were utterly cold and expressionless as they swept over Gordon and Lianna and the two space-captains.

"Have the guards remain outside, Bodmer," he ordered the Councillor in a toneless voice.

Orth Bodmer hesitated. "The prisoners have no weapons. Yet perhaps—"

"Do as I order," rasped Jhal Arn. "I have weapons here. There's no fear of my brother being able to murder *me*."

The nervous Chief Councillor and the guards went out and closed the door.

Gordon was feeling a hot resentment that burned away all that numb feeling of unreality.

He strode a step forward. "Is this the kind of justice you're going to deal the

Empire?" he blazed at Jhal Arn. "The kind of justice that condemns a man before he's heard?"

"Heard? Man, you were *seen*, murdering our father!" cried Jhal Arn, rising. "Corbulo saw you, and now you've killed Corbulo too!"

"Jhal Arn, it is not so!" cried Lianna. "You must listen to Zarth!"

Jhal Arn turned somber eyes on her. "Lianna, I have no blame for you. You love Zarth and let him lead you into this. But as for him, the studious, scholarly brother I once loved, the brother who was plotting all the time for power, who struck our father down—"

"Will you listen?" cried Gordon furiously. "You stand there mouthing accusations without giving me a chance to answer them!"

"I have heard your answers already," rasped Jhal Arn. "Vice-Commander Giron told me when he reported your coming that you were accusing Corbulo of treachery to cover up your own black crimes."

"I can prove that if you'll just give me a chance!" Gordon declared.

"What proof can you advance?" retorted the other. "What proof, that will outweigh the damning evidence of your flight, of Corbulo's testimony, of Shorr Kan's secret messages to you?"

Gordon knew that he had come to the crux of the situation, the crisis upon which he would stand or fall.

He talked hoarsely, telling of Corbulo's treacherous assistance in helping Lianna and him escape, of how that escape had been timed exactly with the assassination of Arn Abbas.

"It was to make it look as though I'd committed the murder and fled!" Gordon emphasized. "Corbulo himself struck down our father and then said he'd seen me do it, knowing I wasn't there to deny the charge!"

He narrated swiftly how the Sirian traitor captain had taken him and Lianna to the Cloud, and briefly summarized the way in which he had induced Shorr Kan, by pretending to join him, to allow him to go to Earth. He did not, could not,

tell how his ruse had hinged on the fact that he was really not Zarth Arn at all. He couldn't tell that.

Gordon finished his swift story, and saw that the black cloud of bitter disbelief still rested on Jhal Arn's face.

"The story is too fantastic! And it has nothing to prove it but your word and the word of this girl who's in love with you. You said you could *prove* your tale!"

"I *can* prove it, if I'm given a chance," Gordon said earnestly.

HE CONTINUED swiftly. "Jhal, Corbulo was not the only traitor in high position in the Empire. Shorr Kan himself told me there were a score of such traitors, though he didn't name them.

"But one traitor I know to be such is Thern Eldred, the Sirian naval captain who took us to the Cloud! He can prove it all, if I can make him talk!"

Jhal Arn frowned at Gordon for a moment. Then he touched a stud and spoke into a panel on the desk.

"Naval Headquarters? The Emperor speaking. There is a captain in our forces named Thern Eldred, a Sirian. Find out if he's on Throon. If he is, send him here immediately under guard."

Gordon grew tense as they waited. If the Sirian were away in space, if he had somehow heard of events and had fled—

Then a sharp voice finally came from the panel. "Thern Eldred has been found here. His cruiser has just returned from patrol. He is being sent to you now."

A half-hour later the door opened and Thern Eldred stepped inside. The Sirian had a wondering look on his hard-bitten greenish face. Then his eyes fell on Gordon and Lianna.

"Zarth Arn!" he exclaimed, startled, recoiling. His hand went to his belt, but he had been disarmed.

"Surprised to see us?" Gordon rasped. "You thought we were still in the Cloud where you left us, didn't you?"

Thern Eldred had instantly recovered his self-possession. He looked at Gordon with assumed perplexity.

"I don't understand what you mean,

about the Cloud!"

Jhal Arn spoke curtly. "Zarth claims that you took him and Lianna by force to Thallarna. He accuses you of being a traitor to the Empire, of plotting with Shorr Kan."

The Sirian's face stiffened in admirably assumed anger.

"It's a lie! Why, I haven't seen Prince Zarth Arn and the princess since the Feast of Moons!"

Jhal Arn looked harshly at Gordon. "You said you could prove your claim, Zarth. So far, it's only your word against his."

Lianna broke in passionately. "Is my word nothing, then? Is a Princess of Fomalhaut to be believed a liar?"

Again, Jhal Arn looked at her somberly. "Lianna, I know you would lie for Zarth Arn, if for nothing else in the universe."

Gordon had expected the Sirian's denial. And he was counting on his estimate of this man's character, to get the truth out of him.

He stepped forward to confront the man. He kept his passionate anger restrained, and spoke deliberately.

"Thern Eldred, the game is up. Corbulo is dead, the whole plot with Shorr Kan is about to be exposed. You haven't a chance to keep your guilt hidden, and when it's exposed it'll mean execution for you."

As the Sirian started to protest, Gordon continued swiftly, "I know what you're thinking! You think that if you stick to your denials you can face me down, that that's your only chance now to save your skin. But it won't work, Thern Eldred!"

"The reason it won't work is because your cruiser, the *Markab*, had a full crew in it when it took us to the Cloud. I know those officers and men had been bribed to support you, that they'll deny ever going to the Cloud. They'll deny it, at first. But when pressure is put on them, there's bound to be at least one weak one among them who'll confess to save himself!"

Now, for the first time, Gordon saw doubt creep into the Sirian's eyes. Yet Thern Eldred angrily shook his head.

"You're still talking nonsense, Prince

Zarth! If you want to question my men in the *Markab*, go ahead. Their testimony will show that you're not telling the truth."

GORDON pressed his attack, his voice ringing now. "Thern Eldred, you can't bluff it out! You *know* one of them will talk! And when he does, it's execution for you.

"There's only one way you can save yourself. That's to turn evidence against the other officials and officers in this plot with you, the others who have been working for Shorr Kan. Give us their names, and you'll be allowed to go scot-free out of the Empire!"

Jhal Arn sternly interrupted. "I'll sanction no such terms! If this man is a traitor, he'll suffer the penalty."

Gordon turned passionately to him. "Jhal, listen! He deserves death for his treachery. But which is most important—that he be punished, or that the Empire be saved from disaster?"

The argument swayed Jhal Arn. He frowned silently for a moment, and then spoke slowly.

"Very well, I'll agree to let him go free if he does make any such confession and names his confederates."

Gordon swung back to the Sirian. "*Your last chance, Thern Eldred!* You can save yourself now, or never!"

He saw the indecision in Thern Eldred's eyes. He was staking everything on the fact that this Sirian was a ruthless realist, ambitious, selfish, with no real loyalty to anyone but himself.

And Gordon's gamble won. Confronted by the imminence of discovery, presented with a loophole by which he might save his own skin, Thern Eldred's defiant denials broke down.

He spoke huskily. "I have the Emperor's word that I am to go scot-free, remember?"

"Then you *were* in a plot?" raged Jhal Arn. "But I'll keep my word. You'll go free if you name your confederates, as soon as we have seized them and verified what you tell."

Thern Eldred was ghastly pale but tried

to smile. "I know when I'm in a trap, and I'm cursed if I'll get myself killed just for loyalty to Shorr Kan. He wouldn't do it for me!"

He went on, to Jhal Arn. "Prince Zarth has told the truth. Chan Corbulo was leader of the little clique of officials who planned to betray the Empire to the Cloud. Corbulo killed Arn Abbas, and had me carry off Zarth Arn and Lianna so they'd be blamed. Everything the prince has said is true."

Gordon felt his eyes blur, his shoulders sag, as those words brought shaky relief from his intolerable strain of many days.

He felt Lianna's warm arms around him, heard her eager voice as big Hull Burrel and Val Marlann excitedly slapped his back.

"Zarth, I knew you'd clear yourself!"

Jhal Arn, face pale as death, came toward Gordon. His voice was hoarse when he spoke.

"Zarth, can you ever pardon me? My God, how was I to know? I'll never forgive myself!"

"Jhal, it's all right," Gordon stumbled. "What else were you to think when it was so cunningly planned?"

"The whole Empire shall soon know the truth," Jhal Arn exclaimed. He swung to Thern Eldred. "First, the names of the other traitors."

Thern Eldred went to the desk and wrote for minutes. He silently handed the sheet to Jhal Arn, who then summoned guards forward.

"You'll be confined until this information is verified," he told the Sirian sternly. "Then I'll keep my promise. You shall go free—but the tale of your treachery will follow you to the remotest stars!"

Jhal Arn turned his eyes to the list of names, when the guards had taken the Sirian out. He cried out, stunned, "Good God, look!"

Gordon saw. The first name on the list was "*Orth Bodmer, Chief Councillor of the Empire.*"

"Bodmer a traitor? It's impossible!" Jhal Arn cried. "Thern Eldred has merely accused him because of some grudge."

Gordon frowned. "Perhaps. But Corbulo was as trusted as Orth Bodmer, remember!"

Jhal Arn's lips tightened. He spoke sharply into a panel on the desk. "Tell Councillor Bodmer to come in at once."

The answer was quick. "Councillor Bodmer left the anteroom some time ago. We do not know where he went."

"Find him and bring him here at once!" ordered Jhal Arn.

"He fled when he saw Thern Eldred brought in here to be questioned!" cried Gordon. "Jhal, he *knew* the Sirian would expose him!"

Jhal Arn sank into a chair. "Bodmer a traitor! Yet it must be so. And look at these other names. "Byrn Ridim, Korrel Kane, Jon Rollory—all trusted officials."

The guard-captain reported. "Highness, we can't find Orth Bodmer anywhere in the palace! He wasn't seen to leave, but isn't to be found."

"Send out a general order for his arrest," snapped Jhal Arn. He handed the list of names to the guard-captain. "And arrest all these men instantly. But do so without arousing attention."

He looked haggardly at Gordon and Lianna. "All this treachery has already shaken the Empire! And the southern star-kingdoms are wavering! Their envoys have requested urgent audience with me tonight, and I fear they mean to throw off their alliance with the Empire!"

CHAPTER XXIII

The Secret of the Empire

GORDON suddenly noticed that Lianna's slim figure was sagging with weariness. He uttered an exclamation of self-reproach.

"Lianna, you must be half dead after all you've been through!"

Lianna tried to smile. "I'll admit that I won't be sorry to rest."

"Captain Burrel will see you to your apartments, Lianna," said Jhal Arn. "I want Zarth to be here with me when the star-kingdom envoys come, to impress on

them that our royal house is again united."

He added to Hull Burrel and Val Marlann, "You two and all your men are completely cleared of the mutiny charge, of course. I'm your debtor for life for helping to expose Corbulo and save my brother."

When they had escorted Lianna out, Gordon sank tiredly into a chair. He was still feeling reaction after the long strain.

"Zarth, I'd rather let you rest too but you know how vital it is to hold the star-kingdoms when this crisis is deepening," Jhal said. "Curse that black devil, Shorr Kan!"

A servant brought *sagua* and the fiery liquor cleared Gordon's numbed mind and brought strength back into his weary body.

Presently a chamberlain opened the door of the room, bowing low.

"The ambassadors of the Kingdoms of Polaris, of Cygnus, of Perseus and of Casiopeia, and of the Baronies of Hercules Cluster!"

The envoys, in full dress uniforms, stopped in amazement when they saw Gordon standing beside Jhal Arn.

"Prince Zarth!" exclaimed the chubby Hercules envoy. "But we thought—"

"My brother has been completely cleared and the real traitors have been apprehended," Jhal informed them. "It will be publicly announced within the hour."

His eyes ran over their faces. "Gentlemen, for what purpose have you requested this audience?"

The chubby Hercules ambassador looked at the grave, aged envoy from Polaris Kingdom. "Tu Shal, you are our spokesman."

Tu Shal's lined old face was deeply troubled as he stepped forward and spoke.

"Highness, Shorr Kan has secretly just offered all our kingdoms treaty of friendship with the League of Dark Worlds! He declares that if we cling to our alliance with the Empire, we are doomed."

The Hercules ambassador added, "He has made the same offer to us Barons, warning us not to join the Empire."

Jhal Arn looked swiftly at Gordon. "So Shorr Kan is now sending ultimatums?

That means he is almost ready to strike."

"We none of us have any love for Shorr Kan's tyranny," Tu Shal was saying. "We prefer to hold to the Empire that stands for peace and union. But it is said that the Cloud has prepared such tremendous armaments and has such revolutionary new weapons that they'll carry all before them if war comes."

Jhal Arn's eyes flashed. "Do you dream he can conquer the Empire when we have the Disruptor to use in case of necessity?"

"That's just it, highness!" said Tu Shal. "It's being said that the Disruptor was never used but once long ago, and that it proved so dangerous then that you would not dare to use it again!"

He added, "I fear that our kingdoms will desert their allegiance to the Empire unless you prove that that is a lie. Unless you prove to us *that you do dare to use the Disruptor!*"

JHAL ARN looked steadily at the envoys as he answered. And his solemn words seemed to Gordon to bring the whisper of something alien and supernally terrible into the little room.

"Tu Shal, the Disruptor is an awful power. I will not disguise that it is dangerous to unchain that power in the galaxy. But it was done once when the Magellans invaded, long ago.

"And it will be done again, if necessary! My father is dead, but Zarth and I can unloose that power. And we *will* unloose it and rive the galaxy before we let Shorr Kan fasten tyranny on the free worlds!"

Tu Shal seemed more deeply troubled than before. "But highness, our kingdoms demand that we *see* the Disruptor demonstrated before they will believe!"

Jhal's face grew somber. "I had hoped that never would the Disruptor have to be taken from its safekeeping and loosed again. But it may be that it would be best to do as you ask."

His eyes flashed. "Yes, it may be that when Shorr Kan learns that we can still wield that power and hears what it can do, he will think twice before precipitating galactic war!"

"Then you will demonstrate it for us?" asked the Hercules envoy, his round face awed.

"There's a region of deserted dark-stars fifty parsecs west of Argol," Jhal Arn told them. "Two days from now, we'll unchain the power of the Disruptor there for you to see."

Tu Shal's troubled face cleared a little. "If you do that, our kingdoms will utterly reject the overtures of the Cloud!"

"And I can guarantee that the Barons of the Cluster will declare for the Empire!" added the chubby envoy from Hercules.

When they had gone, Jhal Arn looked with haggard face at Gordon. "It was the only way I could hold them, Zarth! If I'd refused, they'd have been panicked into submitting to Shorr Kan."

Gordon asked him wonderingly, "You're really going to unloose the Disruptor to convince them?"

The other was sweating. "I don't want to, God knows! You know Brenn Bir's warning as well as I do! You know what nearly happened when *he* used it on the Magellans two thousand years ago!"

He stiffened. "But I'll run even that risk, rather than let the Cloud launch a war to enslave the galaxy!"

Gordon felt a deeper sense of wonder and perplexity, mixed with cold apprehension.

What was it, really, the age-old secret power which even Jhal Arn who was its master could not mention without fear?

Jhal Arn continued urgently. "Zarth, we'll go down now to the Chamber of the Disruptor. It's been long since either of us was there, and we must make sure everything is ready for that demonstration."

Gordon for the moment recoiled. He, a stranger, couldn't pry into this most guarded secret in the galaxy!

Then he suddenly realized that it made little difference if he did see the thing. He wasn't scientist enough to understand it. And in any case, he'd be going back soon to his own time, his own body.

He'd have to find a chance to slip away to Earth in the next day or so, without

letting Jhal Arn know. He could order a ship to take him there.

Once again, at that thought, came the heartbreaking realization that he was on the verge of parting forever from Lianna.

"Come, Zarth!" Jhal was saying impatiently. "I know you must be tired, but there's little time left."

They went out through the ante-room, Jhal Arn waving back the guards who sprang to accompany them.

Gordon accompanied him—down sliding ramps and through corridors and down again, until he knew they must be deeper beneath the great palace of Throon than even the prison where he had been confined.

THEY entered a spiral stair that dropped downward into a hall hollowed from the solid rock of the planet. From this hall, a long, rock-hewn corridor led away. It was lighted by a throbbing white radiance emitted by luminous plates in its walls.

As Gordon walked down this radiant corridor with Jhal Arn, he felt an astonishment he could hardly conceal. He had expected great masses of guards, mighty doors with massive bolts, all kinds of cunning devices to guard the most titanic power in the galaxy.

Instead, there seemed nothing whatever to guard it! Neither on the stair nor in this brilliant corridor was there anyone. And when Jhal Arn opened the door at the corridor end, it was not even locked!

Jhal Arn looked through the open door with Gordon from the threshold.

"There it is, the same as ever," he said with a strong tinge of awe in his voice.

The room was a small, round one hollowed also from solid rock and also lighted by throbbing white radiance from wall-plates.

Gordon perceived at the center of the room the group of objects at which Jhal Arn was gazing with such awe.

The Disruptor! The weapon so terrible that its power had only once been unloosed in two thousand years!

"But what is it?" Gordon wondered

dazedly, as he stared.

There were twelve big conical objects of dull gray metal, each a dozen feet long. The apex of each cone was a cluster of tiny crystal spheres. Heavy, vari-colored cables led from the bases of the cones.

What complexities of unimaginable science lay inside the cones, he could not even guess. Beside heavy brackets for mounting them, the only other object here was a bulky cubical cabinet on whose face were mounted a bank of luminous gauges and six rheostat switches.

"It draws such tremendous power that it will have to be mounted on a battleship, of course," Jhal Arn was saying thoughtfully. "What about the *Ethne* you came in? Wouldn't its turbines provide enough power?"

Gordon floundered. "I suppose so. I'm afraid I'll have to leave all that to you."

Jhal Arn looked astounded. "But Zarth, you're the scientist of the family. You know more about the Disruptor than I do."

Gordon hastily denied that. "I'm afraid I don't now. You see, it's been so long that I've forgotten a lot about it."

Jhal Arn looked incredulous. "Forgotten about the Disruptor? You must be joking! That's one thing we don't forget! Why, it's drilled into our minds beyond forgetfulness on the day when we're first brought down here to have the Wave tuned to our bodies!"

The Wave? What was that? Gordon felt completely at sea in his ignorance.

He advanced a hasty explanation. "Jhal, I told you that Shorr Kan used a brain-scanning device to try to learn the Disruptor secret from me. He couldn't—but in my deliberate effort to forget it so he couldn't, I seem really to have lost a lot of the details."

Jhal Arn seemed satisfied by the explanation. "So that's it! Mental shock, of course. But of course you still remember the main nature of the secret. Nobody could forget that."

"Of course, I haven't forgotten that," Gordon was forced to prevaricate hastily.

Jhal drew him forward. "Here, it will all come back to you. These brackets are

for mounting the force-cones on a ship's prow. The colored cables hook to the similarly colored binding-posts on the control panel, and the transformer leads go right back to drive-generators."

He pointed at the gauges. "They give the exact coordinates in space of the area to be affected. The output of the cones has to balance exactly, of course. The rheostats do that—"

AS HE went on, John Gordon began dimly to perceive that the cones were designed to project force into a selected area of space.

But what kind of force? What did they do to the area or object on which they acted, that was so awful? He dared not ask that.

Jhal Arn was concluding his explanation. "—so the target area must be at least ten parsecs from the ship you work from, or you'll get the backlash. Don't you remember it all now, Zarth?"

Gordon nodded hurriedly. "Of course. But I'm glad just the same that it will be your job to use it."

Jhal looked more haggard. "God knows I don't want to! It has rested here all these centuries without being used. And the warning of Brenn Bir still is true."

He pointed up, as he spoke, to an inscription on the opposite wall. Gordon read it now for the first time.

"To my descendants who will hold the secret of the Disruptor that I, Brenn Bir, discovered: Heed my warning! Never use the Disruptor for petty personal power! Use it only if the freedom of the galaxy is menaced!"

"This power you hold could destroy the galaxy. It is a demon so titanic that once unchained, it might not be chained again. Take not that awful risk unless the life and liberty of all men are at stake!"

Jhal Arn's voice was solemn. "Zarth, when you and I were boys and were first brought down here by our father to have the Wave tuned to us, we little dreamed that a time might come when we would think of using that which has lain here for so long."

His voice rang deeper. "But the life and liberty of all men *are* at stake, if Shorr Kan seeks to conquer the galaxy! If all else fails, we must take the risk!"

Gordon felt shaken by the implications of that warning. It was like a voice of the dead, speaking heavily in this silent room.

Jhal turned and led the way out of the room. He closed the door and again Gordon wondered. No lock, no bolts, no guard!

They went down the long radiant corridor and emerged from it into the softer yellow light of the well of the spiral stair.

"We'll mount the equipment on the *Ethne* tomorrow morning," Jhal Arn was saying. "When we show the star-kingdom envoys—"

"You will never show them anything, Jhal Arn!"

Out from beneath the spiral stair had sprung a dishevelled man who held an atom-pistol levelled on Gordon and Jhal Arn.

"Orth Bodmer!" cried Gordon. "You were hiding in the palace all the time!"

Orth Bodmer's thin face was colorless, dead, twitching in a pallid smile.

"Yes, Zarth," he grated. "I knew the game was up when I saw Thern Eldred brought in. I couldn't get out of the palace without being swiftly traced and apprehended, so I hid in the deeper corridors."

His smile was ghastly now. "I hid, until as I had hoped you came down here to the Chamber of the Disruptor, Jhal Arn! I've been waiting for you!"

Jhal's eyes flashed. "Just what do you expect to gain by this?"

"It is simple," rasped Bodmer. "I know my life is forfeit. Well, so is *your* life unless you spare mine!"

He stepped closer, and Gordon read the madness of fear in his burning eyes.

"You do not break your word when it is given, highness. Promise me that I shall be pardoned, and I will not kill *you* now!"

Gordon saw that panic had driven this rabby, nervous traitor to insane resolve.

"Jhal, do it!" he cried. "He's not worth risking your life for!"

Jhal Arn's face was dull red with fury.

"I have let one traitor go free, but no more!"

INSTANTLY, before Gordon could voice the cry of appeal on his lips, Orth Bodmer's atom-pistol crashed.

The pellet tore into Jhal Arn's shoulder and exploded there as Gordon plunged forward at the maddened traitor.

"You murdering lunatic!" cried Gordon fiercely, seizing the other's gun-wrist and grappling with him.

For a moment, the thin Councillor seemed to have superhuman strength. They swayed, stumbled, and then reeled together from the hall into the brilliant white radiance of the long corridor.

Then Orth Bodmer screamed! He screamed like a soul in torment, and Gordon felt the man's body relax horribly in his grasp.

"The Wave!" screeched Bodmer, staggering in the throbbing radiance.

Even as the man screamed, Gordon saw his whole body and face horribly blacken and wither. It was a shrivelled, lifeless body that sank to the floor.

So ghastly and mysterious was that sudden death, that for a moment Gordon was dazed. Then he suddenly understood.

The throbbing radiance in the corridor and in the Chamber of the Disruptor was the Wave that Jhal Arn had spoken of! It was not light but a terrible, destroying force—a force so tuned to individual human bodily vibrations that it blasted every human being except the chosen holders of the Disruptor secret.

No wonder that no locks or bolts or guards were needed to protect the Disruptor! No man could approach it without being destroyed, except Jhal Arn and Gordon himself. No, not John Gordon but Zarth Arn—it was Zarth Arn's physical body that the Wave was tuned to spare!

Gordon stumbled out of that terrible radiance back into the hall. He bent over the prone form of Jhal Arn.

"Jhal! For God's sake—"

Jhal Arn had a terrible, blackened wound in his shoulder and side. But he was still breathing, still alive.

Gordon sprang to the stair and shouted upward. "Guards! The Emperor has been hurt!"

Guards, officers, officials, came pouring down quickly. Jhal Arn by then was stirring feebly. His eyes opened.

"Bodmer—guilty of this attack on me!" he muttered to them. "Is Zarth all right?"

"I'm here. He didn't hit me, and he's dead now," Gordon husked.

An hour later, he waited in an outer room of the royal apartments high in the palace. Lianna was there, striving to comfort Jhal Arn's weeping wife.

A physician came hurriedly from the inner room to which Jhal Arn had been taken.

"The emperor will live!" he announced. "But he is terribly wounded, and it will take many weeks for him to recover."

He added worriedly, "He insists on Prince Zarth Arn coming in."

Gordon uncertainly entered the big, luxurious bedroom. The two women followed. He stooped over the bed in which Jhal Arn lay.

Jhal Arn whispered an order. "Bring a stereo-transmitting set. And order it switched through for a broadcast to the whole Empire."

"Jhal, you mustn't try it!" Gordon protested. "You can make announcement of my being cleared in another way than that."

"It's not only that that I have to announce," Jhal whispered. "Zarth, don't you realize what it means for me to be stricken down at the very moment when Shorr Kan's plans are reaching their crisis?"

The stereo transmitter was hastily brought in. Its viewer-disk swung to include Jhal Arn's bed, and Gordon and Lianna and Zora.

Jhal Arn painfully raised his head on the pillow, his white face looking into the disk.

"People of the Empire!" he said hoarsely. "The same traitorous assassins who murdered my father have tried to murder me, but have failed. I shall in time be well again."

"Chan Corbulo and Orth Bodmer—they

were the ringleaders of the group! My brother Zarth Arn has been proved completely innocent and now resumes his royal rank.

"And since I am thus stricken down, I appoint my brother Zarth Arn as regent to rule in my place until I recover. No matter what events burst upon us, give your allegiance to Zarth Arn as leader of our Empire!"

CHAPTER XXIV

Storm Over Throon

GORDON uttered an involuntary exclamation of dismayed amazement.

"Jhal, no! I can't wield the rule of the Empire, even for a short time!"

Jhal Arn had already made a feeble gesture of dismissal to the technicians. They had quickly switched off the stereo apparatus as he finished speaking, and were now withdrawing.

At Gordon's protest, Jhal Arn turned his deathly-white face and answered in an earnest whisper.

"Zarth, you must act for me. In this moment of crisis when the Cloud darkens across the galaxy, the Empire cannot be left without a leader."

Zora, his wife, seconded the appeal to Gordon. "You're of the royal house. You alone can command allegiance now."

Gordon's mind whirled. What was he to do? Refuse and finally reveal to them the unguessed truth of his identity and his involuntary imposture?

He couldn't do that now! It *would* leave the Empire without a head, would leave all its people and its allies confused and bewildered, would make them imminent prey for the attack of the Cloud.

But on the other hand, how could he carry out the role when he was still so ignorant of this universe? And how then could he get away to Earth to contact the real Zarth Arn across time?

"You have been proclaimed regent to the Empire and it is impossible to retract that now," said Jhal Arn, in a weak whisper.

Gordon's heart sank. It *was* impossible to retract that proclamation without throwing the Empire into even deeper confusion.

There was only one course open to him. He would have to occupy the regency until he could slip away to Earth as he'd planned. When they had re-exchanged bodies, the real Zarth could come back to be regent.

"I'll do my best, then," Gordon faltered. "But if I blunder—"

"You won't," Jhal Arn whispered. "I trust everything in your hands, Zarth."

He sank back on his pillow, a spasm of pain crossing his white face. Hastily, Zora called the physicians.

The physicians waved them all from the room. "The emperor must not exert himself further or we will not answer for the consequences."

In the splendid outer rooms, Gordon found Lianna at his side. He looked at her shakenly.

"Lianna, how can I lead the Empire and hold the star kings' allegiance, as Jhal would have done?"

"Why can't you?" she flashed. "Aren't you son of Arn Abbas, of the mightiest line of rulers in the galaxy?"

He wanted to cry to her that he was not, that he was only John Gordon of ancient Earth, utterly unfit for such vast responsibility.

He couldn't. He was still caught in the web that had bound him since first—how long ago it seemed!—he had for adventure's sake entered his pact across time with Zarth Arn. He still had to play out the role until he could regain his own identity.

Lianna imperiously waved aside the chamberlains and officials who already were swarming around him.

"Prince Zarth is exhausted! You will have to wait until morning."

Gordon indeed felt drunk with exhaustion, his feet stumbling as he went with Lianna up through the palace to his own old apartment.

SHE left him there. "Try to sleep, Zarth. You'll have the whole weight of the Empire on you tomorrow."

Gordon had thought he could not possibly sleep, but he was no sooner in bed than drugged slumber overcame him.

He awoke the next morning to find Hull Burrel beside him. The big Antarian looked at him a little uncertainly.

"Princess Lianna suggested that I act as your aide, highness."

Gordon felt relieved. He needed someone he could trust, and he had a strong liking for this big, bluff captain.

"Hull, that's the best idea yet. You know I've never been trained for rule. There's so much that I ought to know, and don't."

The Antarian shook his head. "I hate to tell you, but things are piling up fast for you to decide. The envoys of the southern star-kingdoms ask another audience. Vice-Commander Giron has called twice in the last hour from the fleet, to talk to you."

Gordon tried to think, as he quickly dressed. "Hull, is Giron a good officer?"

"One of the best," the Antarian said promptly. "A hard disciplinarian but a fine strategist."

"Then," Gordon said, "we'll leave him in command of the fleet. I'll talk to him shortly."

He had to nerve himself for the ordeal of walking down with his new aide through the palace, of replying to bows, of playing this part of regent-ruler.

He found Tu Shal and the other star-kingdom envoys awaiting him in the little study that was the nerve-center of Empire government.

"Prince Zarth, all our kingdoms regret the dastardly attack on your brother," said the Polarian. "But this will not prevent your demonstrating the Disruptor for us as your brother agreed?"

Gordon was appalled. In the whirl of the night's events, he had almost forgotten that promise.

He tried to evade the question. "My brother is badly stricken, as you know. He is unable to carry out his promise."

The Hercules envoy said quickly, "But *you* know how to wield the Disruptor, Prince Zarth. You could carry out the demonstration."

That was the devil of it, Gordon thought dismayedly. He *didn't* know the details of the Disruptor! He had learned something from Jhal Arn of how the apparatus was operated, but he still hadn't any idea of just what that mysterious, terrible force could do.

"I have heavy duties as regent of the Empire while my brother is helpless, and I may have to postpone that demonstration for a little while," he told them.

Tu Shal's face grew grave. "Highness, you must not! I tell you that failure to give us this reassurance would strengthen the arguments of those who claim the Disruptor is too dangerous to use. It would turn the wavering parties in our kingdoms toward deserting the Empire!"

Gordon felt trapped. He couldn't let the Empire's vital allies desert. Yet how could he wield the Disruptor?

He *might* be able to learn more from Jhal Arn about it, he thought desperately. Enough so that he could try to wield the Disruptor in at least this demonstration?

He made his voice stern, determined. "The demonstration will be made at the first possible moment. This is all I can say."

It did not satisfy the worried envoys, he could see. They looked furtively at each other.

"I will report that to the Barons," said the chubby envoy of Hercules Cluster. The others bowed also, and left.

Hull Burrel gave him no time to reflect on the pressure that this new complication put upon him.

"Vice-Commander Giron on the stereo now, highness! Shall I put him through?"

WHEN, a moment later, the image of the Empire naval commander appeared on the stereo-plate, Gordon saw that the towering Centaurian veteran was deeply perturbed.

"Prince Zarth, I wish first to know if I am to remain in command of the fleet or if a new commander is being sent out?"

"You're appointed full Commander, subject only to review by my brother when he resumes his duties," Gordon said promptly.

Giron showed no elation. "I thank you, highness. But if I am to command the fleet, the situation has reached the point where I must have political information on which to base my strategic plans."

"What do you mean? What is the situation to which you refer?" Gordon asked.

"Our long-range radar has detected very heavy fleet-movements inside the Cloud!" was the sharp answer. "At least four powerful armadas have left their bases in there and are cruising just inside the northern borders of the Cloud."

Giron added, "This suggests strongly that the League of Dark Worlds is planning a surprise attack on us in at least two different directions. In view of that possibility, it is imperative that I make my own fleet dispositions quickly."

He flashed on the familiar stereo-map of the galaxy's great swarm of stars, with its zones of colored light that represented the Mid-Galactic Empire and the star-kingdoms.

"I've got my main forces strung in three divisions on a line here between Rigel and Orion Nebula, each division self-sufficient in battleships, cruisers, phantoms and so on. The Fomalhaut contingent is incorporated in our first division.

"This is our prearranged defense plan, but it counts on the Hercules Barons' and the Polaris Kingdom's fleets resisting any attempt to invade through their realms. It also counts on the Lyra, Cygnus and Cassiopeia fleets joining us immediately when we flash the "ready" signal. But are they going to fulfill their engagements? I must know if the allied Kingdoms are going to stand with us, before I make my dispositions."

Gordon realized the tremendous gravity of the problem that faced Commander Giron far away in that southern void.

"Then you have already sent the "ready" signal to the allied Kingdoms?" he asked.

"I took that responsibility two hours ago, in view of the alarming League fleet movements inside the Cloud," was Giron's curt answer. "So far, I have had no reply from the star-kingdoms."

Gordon sensed the crucial nature of the

moment. "Give me twenty-four more hours, Commander," he asked desperately. "I'll try in that time to get positive commitments from the Barons and the Kingdoms."

"In the meantime, our position here is vulnerable," rasped the Commander. "I suggest that until we are certain of the Kingdoms' allegiance, we should shift our main forces westward toward Rigel to be in position to counter any stroke through Hercules and Polaris."

Gordon nodded quickly. "I leave that decision entirely in your hands. I'll contact you the moment that I have positive news."

Hull Burrell looked at him soberly, as the image of the Commander saluted and vanished.

"Prince Zarth, you'll not get the Kingdoms to stand by their alliance unless you prove to them we can wield the Disruptor!"

"I know," Gordon muttered. He came to a decision. "I'm going to see if my brother can talk to me."

HE REALIZED now that as the Antarian had said, only a clear demonstration of the Disruptor would hold the wavering Kingdoms.

Could he dare try to wield that mysterious force? He knew something of its operations from what Jhal Arn had explained, but that something was not enough. If he could only learn more!

The physicians were worried and discouraging when he went to Jhal Arn's apartments.

"Prince Zarth, he's under drugs and is not able to talk to anyone! It would strain his strength—"

"I must see him!" Gordon insisted. "The situation demands it."

He finally had his way but they warned him, "A few minutes is all we can allow, or we must reject all responsibility for whatever may happen."

Jhal Arn opened drugged, hazed eyes when Gordon bent over him. It took him moments to realize what Gordon was saying.

"Jhal, you must try to understand and

answer me!" Gordon begged. "I've got to know more about the operation of the Disruptor! You know I told you how Shorr Kan's brain-scanner made me forget."

Jhal Arn's voice was a drowsy murmur. "Strange, it made you forget like that. I thought none of us would ever forget, the way every detail was drilled into us when we were boys."

His whisper trailed weakly, sleepily. "You'll remember it all when you have to, Zarth. The force-cones to be mounted on your ship's prow in a fifty-foot circle, the cables to the transformer follow to the binding-posts of the same color, the power-leads to the generators."

His murmur became so faint that Gordon had to bend his head close. "Get an exact radar fix on the center of your target area. Balance the directional thrust of the cones by the gauges. Only switch in the release when all six directional thrusts are balanced—"

His voice dribbled slowly away, weaker and weaker until it was inaudible. Gordon desperately tried to arouse him.

"Jhal, don't go out on me! I've got to know more than that!"

But Jhal Arn had subsided into a drugged slumber from which he could not be awakened.

Gordon ran it all over in his mind. He knew a little more than he had before.

The *procedure* of operating the Disruptor was clear. But that wasn't enough. It was like giving a savage of his own time a pistol and telling him how to pull the trigger. The savage might hold the pistol's muzzle in his own face as he pulled that trigger!

"But I've got to pretend at least that I'm going to demonstrate the thing," Gordon thought tensely. "That may hold the envoys of the Kingdoms until I can learn more from Jhal Arn."

He went down with Hull Burrel to that deep-buried level of the palace in which lay the Chamber of the Disruptor.

The Antarian could not enter that corridor of deadly force that was tuned to blast every living being but Jhal Arn and himself. Gordon went in alone, and

brought back the brackets for mounting the force-cones.

Hull Burrel looked even at these simple brackets in awe, as they took them up through the palace.

By tubeway, he and Hull Burrel sped to the naval spaceport outside Throon. Val Marlann and his men were waiting by the great, grim bulk of the *Ethne*.

Gordon handed over the brackets. "These are to be mounted on the prow of the *Ethne* so that they will form a circle exactly fifty feet in diameter. You'll also make provision for a heavy power connection to the main drive-generators."

Val Marlann's swarthy face stiffened. "You're going to use the Disruptor from the *Ethne*, highness?" he exclaimed excitedly.

Gordon nodded. "Have your technicians start installing these brackets immediately."

He used the ship's stereo to call Tu Shal, the envoy of Polaris Kingdom.

"As you can see, Tu Shal, we are preparing to make the demonstration of the Disruptor. It will take place as soon as possible," Gordon told the ambassador, with assumed confidence.

Tu Shal's troubled face did not lighten. "It should be quickly, highness! Every capital in the galaxy is badly disturbed by rumors of the movements of Cloud fleets!"

GORDON felt almost hopeless, as he sped back to the palace. He couldn't stall like this much longer. And with Jhal Arn still comatose, he couldn't learn more about the Disruptor now.

As night fell, thunder grumbled over the great palace of Throon from an electric storm moving in from the sea. When Gordon went wearily up to his apartments, he glimpsed violet flares of lightning outside its windows, eerily illumining the looming Glass Mountains.

Lianna was waiting for him there. She greeted him anxiously.

"Zarth, terrifying rumors of impending League attack are being whispered through the palace. It is to be war?"

"Shorr Kan may only be bluffing," he

said numbly. "If only things hold off, until—"

He had almost said, until he could get to Earth and re-exchange bodies so the real Zarth could return to bear this fearful responsibility.

"Until Jhal recovers?" Lianna said, misunderstanding. Her face softened. "Zarth, I know the terrible strain all this is to you. But you're proving that you're Arn Abbas' son!"

He wanted to take her into his arms, to bury his face against her cheek. Some of that must have showed in his face, for Lianna's eyes widened a little.

"Zarth!" cried an eager feminine voice.

He and Lianna both turned sharply. Gordon immediately recognized the lovely, dark-haired girl who had entered his rooms.

"Murn!" he exclaimed.

He had almost forgotten this girl who was the real Zarth Arn's secret wife, and whom the real Zarth loved.

Amazement, then incredulity, crossed her face as she looked at Lianna. "Princess Lianna here! I did not dream—"

Lianna said quietly, "There need be no pretense between us three. I know quite well that Zarth Arn loves you, Murn."

Murn colored. She said uncertainly, "I would not have come if I had known—"

"You have more right here than I have," Lianna said calmly. "I shall go."

Gordon made a movement to detain her, but she was already leaving the room.

Murn came toward him and looked up at him anxiously with soft, dark eyes.

"Zarth, before you left Throon you said you would be different when you returned, that all would be with us as before."

"Murn, you will only have to wait a little longer," he told her. "Then all will be as before, I promise you."

"I still cannot understand," she murmured troubledly. "But I'm happy you're cleared of that awful crime, that you've returned."

She looked at him again with that queer shyness as she left. He knew that Murn still sensed a strangeness about him.

Gordon lay in his bed, and in his mind Lianna, Murn, Jhal Arn and the Disruptor

all spun chaotically before he finally slept.

He had slept but two hours when an excited voice awoke him. The storm had broken in full fury upon Throon. Blinding lightning danced continuously over the city, and thunder was bellowing deafeningly.

Hull Burrel was shaking him, and the Antarian's craggy face was dark and taut with excitement.

"The devil's to pay, highness!" he cried. "The Cloud's fleets have come out and crossed our frontier! There's already hard cruiser-fighting beyond Rigel, ships are snuffing out by the scores, and Giron reports that two League fleets are heading toward Hercules!"

CHAPTER XXV

The Star Kings Decide

GALACTIC war! The war the galaxy had dreaded, the long-feared struggle to the death between the Empire and the Cloud!

And it had come at this disastrous moment when he, John Gordon of ancient Earth, bore the responsibility of leading the Empire's defense!

Gordon sprang from bed. "League fleets heading toward Hercules? Are the Barons ready to resist?"

"They may not resist at all!" cried Hull Burrel. "Shorr Kan is stereo-casting to them and to all the Kingdoms, warning them that resistance would be useless because the Empire is going to fall!

"He's telling them that Jhal Arn is too near death to wield the Disruptor, and that *you* can't use it because you don't know its secret!"

As though the words were a flash illuminating an abyss, Gordon suddenly realized that that was why Shorr Kan had finally struck.

Shorr Kan knew that he, John Gordon, was a masquerader inside Zarth Arn's physical body. He knew that Gordon had no knowledge of the Disruptor such as the real Zarth had.

Knowing that, the moment he had heard of Jhal Arn being stricken down, Shorr

Kan had launched the League's long-planned attack. He counted on the fact that there was no one now to use the Disruptor against him. He should have realized that was what Shorr Kan would do!

Hull Burrel was shouting on, as Gordon dressed with frantic haste. "That devil is talking by stereo to the star-kings right now! You've got to hold them to the Empire!"

Officials, naval officers, excited messengers were already crowding into the room and clamoring wildly for Gordon's attention.

Hull Burrel roughly cleared them from the way as he and Gordon hastened out and raced down through the palace to the study that was the nerve-center of the Mid-Galactic Empire.

All the palace, all Throon, was waking this fateful night! Voices shouted, lights were flashing on, great warships taking off for space could be heard rushing across the storm-swept sky.

In the study, Gordon was momentarily stunned by the many telestereos that blazed with light and movement. Two of them gave view from the bridges of cruisers in the thick of the frontier fighting, shaking to thundering guns and rushing through space ablaze with atom-shells.

But then Gordon's eyes flew toward the stereo on which the dark, dominating image of Shorr Kan stood speaking. His black head bare, his eyes flashing confidently, the Cloud-man was broadcasting.

"—so I repeat, Barons and rulers of the star-kingdoms, that the Cloud's war is not directed against you! Our quarrel is only with the Empire, which has too long sought to dominate the whole galaxy under the guise of working for peaceful federation. We in the League of Dark Worlds have finally struck out against that selfish aggrandizement.

"Our League offers friendship to your Kingdoms! You need not join this struggle and be dragged down to destruction with the Empire. All we ask is that you let our fleets pass through your realms without resistance. And you shall be full,

equal members in the real democratic federation of the galaxy which we shall establish when we have conquered.

"For we shall conquer! The Empire will fall! Its forces cannot stand against our mighty new fleets and weapons. Nor can their long-vaunted Disruptor save them now, for they have no one to use it. Jhal Arn, who knows it, lies stricken down—and Zarth Arn does not know how to use it!"

SHORR KAN'S voice rang loud with supreme confidence as he emphasized his final declaration.

"Zarth Arn does not know that because he is not really Zarth Arn at all—he is an impostor masquerading as Zarth Arn! I have absolute proof of that! Would I have challenged the Disruptor's menace if I had not? The Empire cannot use that secret, and thus the Empire is doomed. Star-kings and Barons, do not join a doomed cause and wreck your own realms!"

Shorr Kan's image faded from the stereo as he concluded that ringing declaration.

"Good God, he must have gone crazy!" gasped Hull Burrel to Gordon. "To claim that you're not really yourself!"

"Prince Zarth!" rang an officer's excited call across the room. "Commander Giron calling—urgent!"

Still stunned by Shorr Kan's audacious stroke to neutralize the Kingdoms, Gordon stumbled hastily to that other stereo.

In its view, Commander Ron Giron and his officers stood on a battleship's bridge, bent over their radar screens. The towering Centaurian veteran turned toward Gordon.

"Highness, what about the star-kingdoms?" he rasped. "We've radar reports that two of the big League fleets that came out of the Cloud are now speeding west toward Hercules and Polaris. Are the Barons and the Kingdoms going to submit to them or resist? We must know that!"

"We'll know that for certain just as soon as I can contact the Kingdoms' envoys," Gordon said desperately. "What is your situation?"

Giron made a curt gesture. "Only our cruiser-screens are fighting so far. Some Cloud phantoms slipped through them and are sniping at our main fleet here back of Rigel, but that's not serious yet.

"What *is* serious is that I daren't commit my main forces on this southern front if the League is going to flank me through Hercules! If the Barons and the Kingdoms are not going to join us, I'll have to fall far back westward to cover Canopus from that flank thrust."

GORDON, staggered by the moment of awful responsibility, tried to steady his whirling thoughts.

"Avoid commitment of your main forces as long as possible, Giron," he begged. "I'm still hoping to hold the Kingdoms to us."

"If they fail us now, we're in a bad fix!" Giron said grimly. "The League has twice as many ships as we figured! They'll cut around in short order to attack Canopus."

Gordon swung back to Hull Burrel. "Get the ambassadors of the star-kings, at once! Bring them here!"

Burrel raced out of the room. But almost at once, he returned.

"The ambassadors are already here! They just arrived!"

Tu Shal and the other envoys of the star-kingdoms crowded into the room a moment later, pale, excited and tense.

Gordon wasted no time on protocol. "You've heard that two of Shorr Kan's fleets are heading for Hercules and Polaris?"

Tu Shal, pallid to the lips, nodded. "The news was brought to us instantly. We have heard Shorr Kan's broadcast—"

Gordon interrupted harshly. "I demand to know if the Barons are going to resist his invasion or allow him free passage! And I demand to know if the Kingdoms are going to honor their engagements of alliance with the Empire, or surrender to Shorr Kan's threats!"

The deathly-white Lyra ambassador answered. "Our Kingdoms will honor their engagements if the Empire will honor *its* pledge! When we pledged alliance, it was

because the Empire promised to use the Disruptor if necessary to protect us."

"Have I not told you that the Disruptor *will* be used?" flashed Gordon.

"You promised that but you evaded demonstrating it!" cried the Polaris envoy. "Why should you do that if you know the secret? Suppose that Shorr Kan is right and that you *are* an impostor—then we'd be throwing our realms away in a useless fight!"

Hull Burrel, carried away by anger, uttered a roar. "Do you believe for a moment Shorr Kan's fantastic lie that Prince Zarth is an impostor?"

"Is it a lie?" demanded Tu Shal, gazing fixedly at Gordon's face. "Shorr Kan must know *something* to assure him the Disruptor won't be used, or he'd never have risked this attack!"

"Curse it, you can see for yourself that he's Zarth Arn, can't you?" raged the Antarian captain.

"Scientific cunning can enable one man to masquerade in the disguise of another!" snapped the Hercules envoy.

Gordon, desperate in the face of this final terrible stumbling-block, seized upon an idea that crossed his mind.

"Hull, be still!" he ordered. "Tu Shal and you others, listen to me. If I prove to you that I *am* Zarth Arn and that I can and will use the Disruptor, will your Kingdoms stand by the Empire?"

"Polaris Kingdom will!" exclaimed that envoy instantly. "Prove that and I'll flash instant word to our capital."

Others chimed in swiftly, with the same assurance. And the Hercules ambassador added, "We Barons of the Cluster want to resist the Cloud, if it's not hopeless. Prove that it isn't, and we'll fight!"

"I can prove in five minutes that I am the real Zarth Arn!" rasped Gordon. "Follow me! Hull, you come too!"

Bewilderedly, they hastened after Gordon as he went out of the room and down through the corridors and ramps of the palace.

They came thus down the spiral stair to the hall from which extended that corridor of throbbing, deadly white radiance that

led to the Chamber of the Disruptor.

GORDON turned to the bewildered envoys. "You all must know what that corridor is?"

Tu Shal answered. "All the galaxy has heard of it. It leads to the Chamber of the Disruptor."

"Can any man go through that corridor to the Disruptor unless he is one of the royal family entrusted with it?" Gordon pressed.

The envoys began to understand now. "No!" exclaimed the Polarian. "Everyone knows that only the heirs of the Empire's rulers can enter the Wave that is tuned to destroy anyone except them."

"Then watch!" Gordon cried, and stepped into the radiant corridor.

He strode down it into the Chamber of the Disruptor. He grasped one of the big gray metal force-cones. Upon the wheeled platform on which it rested, he wheeled that cone back out of the chamber and the corridor.

"Now do you believe that I'm an impostor?" he demanded.

"By Heaven, no!" cried Tu Shal. "No one but the real Zarth Arn could have entered that corridor and lived!"

"Then you are Zarth Arn, and you *do* know how to use the Disruptor!" another cried.

Gordon saw that he had convinced them. They had thought it possible that he might be another man disguised as Zarth Arn. And they knew now that that could not be so.

What they had not even dreamed, what even Shorr Kan had not told lest it meet utter disbelief, was that he was Zarth Arn in physical body but another man in mind!

Gordon pointed to the big force-cone. "That is part of the Disruptor apparatus. The rest of it I'll bring out, to be mounted at once on the battleship *Ethne*. And then that ship goes with me out to use the Disruptor's awful power and crush the League's attack!"

Gordon had decided, had in these minutes of strain made his fateful choice.

He *would* try to use the Disruptor! He knew its operation from Jhal Arn's explanations, even if its purpose and power were still a dread mystery to him. He would risk catastrophe to use it.

For it was his own strange imposture, involuntary though it had been, that had brought the Empire to this brink of disaster. It was his responsibility, his duty to the real Zarth Arn, to attempt this.

Tu Shal's aging face flamed. "Prince Zarth, if you intend thus to keep the Empire's pledge, we will keep *our* pledge! Polaris Kingdom will fight with the Empire against the Cloud!"

"And Lyra! And we Barons!" rang the eager, excited voices. "We'll flash word to our capitals that you're going out with the Disruptor to join the struggle!"

"Send that word at once, then!" Gordon told them. "Have your Kingdoms place their fleets under Commander Giron's orders!"

And as the excited ambassadors hurried back up the stairs to send their messages, Gordon turned to Hull Burrel.

"Call the *Ethne's* technicians here with a squad of guards, Hull. I'll bring out the apparatus of the Disruptor and it can be taken at once to the *Ethne*."

Back and forth into the silent, radiant Chamber, Gordon now hastened, bringing out one by one the big, mysterious cones. He had to do this himself—no one else except Jhal Arn could enter there.

By the time he wheeled out the bulky cubical transformer, Hull Burrel was back with Captain Val Marlann and his technicians.

Working hastily, but handling the apparatus with a gingeriness that betrayed their dread, the men loaded the equipment into tubeway cars.

A HALF-HOUR later they stood in the naval spaceport beneath the shadow of the mighty *Ethne*. It and two other battleships were the only major units left here, the others all already on their way to join the epochal struggle.

Under the flare of lightning and crash of thunder and rain, the technicians labored

to bolt the big force-cones to the brackets already in place around the prow of the battleship. The tips of the cones pointed forward, and their cables were brought back through the hull into the navigation-room behind the bridge.

Gordon had had the cubical transformer with its control-panel set up here. He directed the hooking of the colored cables to the panel as Jhal Arn had explained. The massive power-leads were hastily run back and attached to the mighty drive-generators of the ship.

"Ready for take-off in ten minutes!" Val Marlann reported, his face gleaming with sweat.

Gordon was shaking with strain. "One last check of the cones. There's time for it."

He raced out into the storm, peering up at the huge, overhanging prow of the warship. The twelve cones fastened up there seemed tiny, puny.

Impossible to think that this little apparatus could produce any such vast effect as men expected! And yet—

"Take-off, two minutes!" yelled Hull Burrel from the gangway, over the din of alarm bells and shouts of hurrying men.

Gordon turned. And as he did so, through the confusion a slim figure ran toward him.

"Lianna!" he cried. "Good God, why—"

She came into his arms. Her face was white, tear-wet, as she raised it to him.

"Zarth, I had to come before you left! If you didn't come back, I wanted you to know—I still love you! I always will, even though I know it's Murn you love!"

Gordon groaned, as he held her in his arms with his cheek against her tear-wet face.

"Lianna! Lianna! I can't promise for the future, you may find all things changed between us in the future, but I tell you now that it is you I love!"

A wave of final, bitter heartbreak seemed to surge up in him at this last moment of wild farewell.

For it was farewell forever, Gordon knew! Even if he survived the battle, it must not be he but the real Zarth Arn who would come back to Throon. And

if he didn't survive—

"*Prince Zarth!*" yelled Hull Burrel's hoarse voice in his ear. "It is time!"

Gordon, as he tore away, had a swift vision of Lianna's white face and shining eyes that he would never forget. For he knew that it was his last.

And then Hull Burrel was dragging him bodily up the gangway, doors were grinding shut, great turbines thundering, bells ringing sharp signals down the corridors.

"Take off!" warned the annunciators shrilly, and with a crash of splitting air the *Ethne* zoomed for the storm-swept heavens.

Upward it roared, and with it raced the other two battleships, bolting like metal things of thought up across the star-sown sky.

"Giron's calling!" Hull Burrel was shouting in his ear as they stumbled forward along the corridors. "Heavy fighting now near Rigel! And the League's eastern fleets are forcing through!"

IN THE navigation-room where Gordon had set up the Disruptor apparatus, Commander Giron's grim image flashed from a telestereo.

Over the Commander's shoulder Gordon glimpsed a bridgeroom window that looked out on a space literally alive with an inferno of bursting atom-shells, of exploding ships.

Giron's voice was cool but swift. "We've joined fleet action with the League's two eastern forces. And we're suffering prohibitive losses. The enemy has some new weapon that seems to strike down our ships from within—we can't understand it."

Gordon started. "The new weapon that Shorr Kan boasted to me about! How does it operate?"

"We don't know!" was the answer. "Ships suddenly drift out of action all around us, and don't answer our calls."

Giron added, "The Barons report their fleet is moving out east of the Cluster to oppose the Cloud's two fleets coming toward them. The fleets of Lyra, Polaris and the other allied Kingdoms are already coming down full speed from the northwest to join my command."

The Commander concluded grimly, "But this new weapon of the League, whatever it is, is decimating us! I'm withdrawing west but they're hammering us hard, and their phantoms keep getting through. I feel it my duty to warn that we can't fight long in the face of such losses."

Gordon told him, "We're coming out with the Disruptor and we're going to use it! But it'll take many hours for us to reach the scene."

He tried to think, before he gave orders. He remembered what Jhal Arn had said, that the target area of the Disruptor's force must be as limited as possible.

"Giron, to utilize the Disruptor it is imperative that the League's fleets be maneuvered together. Can you somehow do that?"

Giron rasped answer. "The only chance I have of doing that is to retreat slightly southwestward from this branch of the attack, as though I meant to go to the aid of the Barons. That might draw the Cloud's two attacking forces together."

"Then try it!" Gordon urged. "Fall back southwestward and give me an approximate position for rendezvous with you."

"Just west of Deneb should be the approximate position by the time you get here," Giron answered. "God knows how much of our fleet will be left then if this new Cloud weapon keeps striking us down!"

Giron switched off, but in other telescopes unfolded the battle that was going on all along the line near distant Rigel.

Beside the ships that perished in the inferno of atom-shells and the stabbing attack of stealthy phantom-cruisers, the radar screens showed many Empire ships suddenly drifting out of action.

"What in the devil's name has the Cloud got that can disable our warships like that?" sweated Hull Burrel.

"Whatever it is, it's smashing in Giron's wings fast," muttered Val Marlann tensely. "His withdrawal may become a rout!"

Gordon turned from the dazing, bewildering stereotypes that showed the battle, and glanced haggardly through the bridge windows.

The *Ethne* was already hurtling at increasing velocity past the smaller *Argo* suns, speeding southward toward the Armageddon of the galaxy.

Gordon felt overwhelmed by dread, a panicky reaction. He had no place in this titanic conflict of future ages! He had been mad to make the impulsive decision to try to use the Disruptor!

He use the Disruptor? How could he, when he knew so little of it? How dared he unchain the ghastly power which its own discoverer had warned could rive and destroy the galaxy itself?

CHAPTER XXVI

Battle Between the Stars

THROBBING, droning, quivering in every girder to the thrust of its mighty drive-jet, the *Ethne* and its two companion ships raced southward across the starry spaces of the galaxy.

For hour on hour, the three great battle-ships had rushed at their highest speed toward the fateful rendezvous near the distant spark of Deneb, toward which the Empire forces were retreating.

"The Barons are fighting!" Hull Burrel cried to Gordon from the telestereo into which he was peering with flaming eyes. "God, look at the battle off the Cluster!"

"They should be drawing back by now toward the Deneb region as Giron's forces are doing!" Gordon exclaimed.

He was stunned by the telestereo scene. Transmitted from one of the Cluster ships in the thick of that great battle, it presented an almost incomprehensible vista of mad conflict.

To the eye, there was little design or purpose in the struggle. The star-decked vault of space near the gigantic ball of suns of Hercules Cluster seemed pricked with tiny flares. Tiny flares, shining forth swiftly and as swiftly vanishing! And each of those flares was the bursting of an atomic broadside far in space!

Gordon could not completely visualize that awful battle. This warfare of the far future was too strange for him to supply

from experience the whole meaning of that dance of brilliant death-flares between the stars. This warfare, in which ships far, far apart groped for each other with radar beams and fired their mighty atom-guns by instant mechanical computation, seemed alien and unearthly to him.

The pattern of the battle he witnessed began slowly to emerge. That will-of-the-wisp dance of flares was moving slowly back toward the titanic sun-swarm of the Cluster. The battle-line was crackling and sparkling north and northwest of the great sun-cluster now.

"They're pulling back, as Giron ordered!" Hull Burrel exclaimed. "Good God, half the Barons' fleet must be destroyed by now."

Val Marlann, captain of the *Ethne*, was like a caged tiger as he paced back and forth between the stereos.

"Look at what's happening to Giron's main fleet retreating from Rigel!" he said hoarsely. "They're hammering it like mad now. Our losses must be tremendous!"

The stereo at which he glared showed Gordon the similar, bigger whirl of death-flares withdrawing westward from Rigel.

He thought numbly that it was as well he *couldn't* visualize this awful armageddon of the galaxy as the others could. It might well shake his nerve disastrously, and he had to keep cool now.

"How long before we'll rendezvous with Giron's fleet and the Barons'?" he cried to Val Marlann.

"Twelve hours, at least," said the other tautly. "And God knows if there'll be any of the Barons' ships left to join up."

"Curse Shorr Kan and his fanatics!" swore Hull, his craggy face crimson with passion. "All these years, they've been building ships and devising new weapons for this war of conquest!"

Gordon went back across the room, to the control-board of the Disruptor apparatus. For the hundredth time since leaving Throon, he rehearsed the method of releasing the mysterious force.

"But what does that force *do* when I release it?" he wondered again, tensely. "Does it act as a giant beam of lethal

waves, or a zone of annihilation for solid matter?"

Vain speculation! It could hardly be those things. Brenn Bir would not have left solemn warning that it could destroy the galaxy, if it were!

HOURS of awful strain passed as the *Ethne's* little squadron drew nearer the scene of the titan struggle. Every hour had seen the position of the Empire's forces growing worse.

Giron, retreating southwestward to join the battered Hercules fleet still fighting off the Cluster, had been joined finally by the Lyra, Polaris and Cygnus fleets near the Ursa Nebula.

The Empire commander had turned on the pursuing League armada and had fought savagely there for two hours, a staggering rearguard action that had involved both forces in the glowing Nebula.

Then Gordon heard Giron ordering the action broken off. The order, in secret scrambler-code like all naval messages, came from their own stereos.

"Captain Sandrell, Lyra Division—pull out of the Nebula! The enemy is forcing a column between you and the Cygnus Division!"

The Lyra commander's desperate answer flashed. "Their phantoms have piled up the head of our column. But I'll—"

The message was abruptly interrupted, the stereo going dark. Gordon heard Giron vainly calling Sandrell, with no response.

"It's what happens over and over!" raged Hull Burrel. "An Empire ship reports phantoms near, and then suddenly its report breaks off and the ship drifts silent and disabled!"

"Shorr Kan's new weapon!" gritted Val Marlann: "If we only had an idea what it is!"

Gordon suddenly remembered what Shorr Kan had told him, when he had boasted of that weapon in Thallarna.

"—it's a weapon that can strike down enemy warships from inside them!"

Gordon repeated that to the others and cried, "Maybe I'm crazy but it seems to me the only way they could strike down

a ship from inside is by getting a force-beam of some kind in on the ship's own stereo beams! Every ship that has been stricken has been stereo-ing at the time!"

"Hull, it could be!" cried Val Marlann. "If they can tap onto our stereos and use them as carrier-beams right into our own ships—"

He sprang to the stereo and hastily called Giron and told him their suspicion.

"If you use squirt transmission on our scrambler code it may baffle their new weapon!" Val Marlann concluded. "They won't be able to get a tap on our beams in time. And keep damper-equipment in your stereo-rooms in case they do get through."

Giron nodded understandingly. "We'll try it. I'll order all our ships to use only momentary transmission, and assemble messages from the squirts on recorders."

Val Marlann ordered men with "dampers," the generators of blanketing electric fields that could smother dangerous radiation, to stand by near their own stereos.

Already, the Empire ships were obeying the order and were "squirting" their messages in bursts of a few seconds each.

"It's helping—far fewer of our ships are being disabled now!" Giron reported. "But we've been badly battered and the Barons' fleet is just a remnant. Shall we fall back south into the Cluster?"

"No!" Gordon cried. "We daren't use the Disruptor inside the Cluster. You must hold them near Deneb."

"We'll try," Giron said grimly. "But unless you get here in the next four hours, there'll not be many of us left to hold."

"Four hours?" sweated Val Marlann. "I don't know if we can! The *Ethne's* turbines are running on overload now!"

As the *Ethne's* small squadron rushed on southward toward the white beacon of Deneb, the great battle east of the star was reeling back toward it.

DEATH-DANCE of flaring, falling starships moved steadily westward through the galaxy spaces! Up from the south, the battered remnants of the Barons' valiant fleet was coming to join with the

Empire and Kingdoms' fleets for the final struggle.

Armageddon of the galaxy, in truth! For now the triumphant two main forces of the Cloud were joining together in the east and rushing forward in their final overwhelming attack.

Gordon saw in the telestereo and radar screens this climactic struggle which the *Ethne* had almost reached.

"A half hour more—we might make it, we might!" muttered Val Marlann through stiff lips.

The watch officer at the main radar screen suddenly yelled. "Phantoms on our port side!"

Things happened then with rapidity that bewildered John Gordon. Even as he glimpsed the Cloud phantom-cruisers suddenly unmasking in the radar screen, there was a titan flare in space to their left.

"One of our escort gone!" cried Hull Burrel. "Ah!"

The guns of the *Ethne*, triggered by mechanical computers swifter than any human mind could be, were going off thunderously.

Space around them flashed blinding bright with the explosion of heavy atom-shells which barely missed them. Two distant flares burgeoned up and died, an instant later.

"We got two of them!" Hull cried. "The rest have darked out and they won't dare come out of dark-out again."

Giron's voice came from the stereo, the "squirt" transmission being pieced together by recorders to make a normal message.

"Prince Zarth, the League armada is flanking us and within the hour they'll cut us to pieces!"

Gordon cried answer. "You've got to hold on a little longer, until—"

At that instant, in the stereo-image, Giron vanished and was replaced by pallid, black-uniformed men who raised heavy rod-shaped weapons in quick aim.

"Cloud-men! Those League phantoms have tapped our beam and are using Shorr Kan's new weapon!" screeched Burrel.

A bolt of ragged blue lightning shot from the rod-like weapon of the foremost Cloud-

man in the stereo. That flash of force shot over Gordon's head and tore through the metal wall.

Invasion of the ship by stereo-images! Images that could destroy them, by that blue bolt that used the stereo-beam as carrier!

It lasted but a few seconds, then the "squirt" switch functioned and the Cloud-men images and their weapons disappeared.

"So that's how they do it!" cried Burrel. "No wonder they got half our ships with it before we found out about it!"

"Turn on those dampers, quick!" ordered Val Marlann. "We're likely to get another burst from the stereo any moment!"

Gordon felt the hair on his neck bristling as the *Ethne* rushed now into the zone of battle itself. An awful moment was approaching.

Giron had the Empire and Kingdom ships massed in a short defensive line with its left flank pinned on Deneb's great, glaring white mass. The heavier columns of the League fleets were pressing it in a crackling fire of flaring ships, seeking to roll up the right flank.

Space seemed an inferno of dying ships, of flames dancing between the stars, as the *Ethne* fought forward to the front of the battle. Its own guns were thundering at the Cloud phantoms that were hanging to it steadily, repeatedly emerging from dark-out to attack.

"Giron, we're here!" Gordon called. "Now spread your line out thinner and withdraw at full speed."

"If we do that, the League fleets will bunch together and tear through our thinner line like paper!" protested Giron.

"That's just what I want, to bunch the League ships as much as possible!" Gordon replied. "Quick, we'll—"

A GAIN, the stereo-image of Giron suddenly was replaced by a Cloud-man with the rod-shaped weapon.

The weapon loosed a blue bolt—but the bolt died, smothered by the fields of the "dampers." Then the "squirt" switch functioned again to cut the stereo.

"The way they've cut our communications would be enough alone to decide the battle!" groaned Hull Burrel.

In the radar screen, Gordon tensely watched the maneuver that was now rapidly taking place in space before them.

Giron's columns were falling back westward swiftly, turning to run and spreading out thinly as they did so.

"Here comes the League fleet!" cried Val Marlann.

Gordon too saw them in the screen, the massed specks that were thousands of League warships less than twelve parsecs away.

They were coming on in pursuit but they were not bunching as he had hoped. They merely held a somewhat shorter and thicker line than before.

He knew that he'd have to act, anyway. He couldn't let them get closer before unloosing the Disruptor, remembering Jhal Arn's caution.

"Hold the *Ethne* here and point it exactly at the center of the League battle-line," Gordon ordered hoarsely.

Giron's fleets was now behind them, as the *Ethne* remained facing the oncoming League armada.

Gordon was at the control-panel of the Disruptor transformer. He threw in the six switches of the bank, turning each rheostat four notches.

The gauge-needles began to creep across the dials. The generators of the mighty battleship roared louder and louder as the mysterious apparatus sucked unimaginable amperage from them.

Was that power being stored somehow in the force-cones on the prow? And what had Jhal Arn told him? Gordon tried to remember.

"—the six directional gauges must exactly balance if the thrust is not to create disaster!"

The gauges did *not* balance. He frantically touched this rheostat, then that one. The needles were creeping up toward the red critical marks, but some were too fast, too fast!

Gordon felt beads of sweat on his face, felt stiff with superhuman strain as the others watched him. He couldn't do this!

He *dared* not loose this thing in blind ignorance!

"Their columns are coming fast—eight parsecs away now!" Val Marlann warned tightly.

Three, then four of the needles, were on the red. But the others were short. Gordon hastily notched up their rheostats.

They were all above the red mark now but did not exactly match. The *Ethne* was shaking wildly from the thunder of its straining turbines. The air seemed electric with an awful tension.

The needles matched! Each was in the red zone on the gauge, each at the same figure—

"Now!" cried Gordon hoarsely, and threw shut the main release-switch.

CHAPTER XXVII

The Disruptor

PALE, ghostly beams stabbed out from the prow of the *Ethne* toward the dim region of space ahead. Those pallid rays seemed almost to creep slowly forward, fanning out as they did so.

Gordon, Hull Burrel and Val Marlann crouched at the window frozen and incapable of movement as they looked ahead. And there seemed no change.

Then the massed specks in the radar screen that marked the position of the Cloud fleet's advancing line seemed to waver slightly. A flicker seemed to run through that area.

"Nothing's happening!" Burrel groaned. "Nothing! The thing must be—"

A point of blackness had appeared far ahead. It grew and grew, pulsing and throbbing.

And swiftly it was a great, growing blot of blackness, not the blackness of mere absence of light but such living, quivering blackness as no living man had ever seen.

On the radar screen, the area that included half the Cloud fleet's advancing battle-line had been swallowed by darkness! For there was a black blot on the screen too, a blot from which radar-rays recoiled.

"God in Heaven!" cired Val Marlann, shaking. "*The Disruptor is destroying space itself in that area!*"

The awful, the unimaginable answer to the riddle of the Disruptor's dread power flashed through Gordon's quaking mind at last!

He still did not understand, he would never understand, the scientific method of it. But the effect of it burst upon him. The Disruptor was a force that annihilated, not matter, but space!

The space-time continuum of our cosmos was four-dimensional, a four-dimensioned globe floating in the extra-dimensional abyss. The thrust of the Disruptor's awful beams destroyed a growing section of that sphere by thrusting it out of the cosmos!

It flashed across Gordon's appalled mind in a second. He was suddenly *afraid!* He convulsively ripped open the release-switch of the thing. Then as the next second ticked, the universe seemed to go mad.

Titan hands seemed to bat the *Ethne* through space with raving power. They glimpsed stars and space gone crazy, the huge glaring white mass of Deneb heaving wildly through the void, comets and dark-stars and meteor-drift of the void streaming insanely in the sky.

Gordon, hurled against a wall, quaked in his soul as the universe seemed to rise in mad vengeance against the puny men who had dared to lay desecrating hands on the warp and woof of eternal space.

Gordon came back to dull awareness many minutes later. The *Ethne* was whirling and tossing on furious etheric storms, but the starry vault of space seemed to have quieted from its insane convulsion.

Val Marlann, blood streaming from a great bruise on his temple, was clinging to a stanchion and shouting orders into the annunciator.

He turned a ghastly white face. "The turbines are holding and the disturbances are quieting. That convulsion nearly threw our ships into Deneb, and quaked the stars in this whole part of the galaxy!"

"The back-lash reaction!" Gordon choked. "It was that—the surrounding

space collapsing upon the hole in space the Disruptor made."

Hull Burrel hung over the radar screen.

"Only half the Cloud ships were destroyed in the convulsion!"

Gordon shuddered. "I can't use the Disruptor again! I won't!"

"You won't have to!" Burrel said eagerly. "The remainder of their fleet is fleeing back in panic toward the Cloud!"

THEY were not to be blamed, Gordon thought sickly. To have space itself go mad and collapse around one—he would never have dared unloose that force if he had known.

"I know now why Brenn Bir warned never to use the Disruptor lightly!" he said hoarsely. "Pray God it never will be used at all again."

Calls came from the stereo thick and fast, stunned inquiries from Giron's ships.

"What happened?" cried the shaken Commander over and over.

Hull Burrel had not lost sight of their goal, of what they must do.

"The League fleet's in full flight toward the Cloud, or what's left of them are!" he told the Commander exultantly. "If we follow we can smash them once and for all!"

Giron too fired at the opportunity. "I'll order the pursuit at once."

Back across the galactic spaces toward the shelter of the Cloud, the remnants of the League fleet were streaming. And after them, hour by hour, sped the *Ethne* and the Empire's battered fleet.

"They're finished, if we can smash Shorr Kan's rule and destroy their remaining ships!" Burrel exulted.

"You don't think Shorr Kan was with their fleet?" Gordon asked.

"He's too foxy for that—he'd be running things from Thallarna, never fear!" Val Marlann declared.

Gordon agreed, after a moment's thought. He knew Shorr Kan was no coward, but he'd have been directing his vast assault from his headquarters inside the Cloud.

The League of Dark Worlds' ships disappeared into the shelter of the Cloud

long hours later. Soon afterward, the Empire fleet drew up just outside that vast, hazy gloom.

"If we go in after them, we might run into ambushes," Giron declared. "The place is rotten with navigational perils that we know nothing about."

Gordon proposed, "We'll demand their surrender, give them an ultimatum."

"Shorr Kan will not surrender!" Hull Burrel warned.

But Gordon had them beam a stereocast into the Cloud toward Thallarna, and spoke by it.

"To the Government of the League of Dark Worlds! We offer you a chance to surrender. Give up and disarm under our directions and we promise that no one will suffer except those criminals who led you into this aggression.

"But refuse, and we'll turn loose the Disruptor upon the whole Cloud! We'll blot this place forever from the galaxy!"

Val Marlann looked at him, appalled. "You'd do that? But good God—"

"I wouldn't dare do that!" Gordon answered. "I'll never turn loose the Disruptor again. But they've felt its power and may be bluffed by it."

There came no answer to their stereomessage. Again, after an hour, he repeated it.

Again, no answer. Then finally, after another wait, Giron's stern voice came.

"It seems that we'll have to go in there, Prince Zarth."

"No, wait," cried Hull Burrel. "A message is coming through from Thallarna!"

In the stereo had appeared a group of wild-looking Cloud-men, some of them wounded, in a room of Shorr Kan's palace.

"We agree to your terms, Prince Zarth!" their spokesman said hoarsely. "Our ships will be docked and disarmed immediately. You will be able to enter in a few hours."

"It could be a trick!" Val Marlann rasped. "It would give Shorr Kan time to lay traps for us."

THE Cloud-man in the stereo shook his head. "Shorr Kan's disastrous tyranny is overthrown. When he refused

to surrender, we rose in rebellion against him. I can prove that by letting you see him. He is dying."

The telestereo switched its scene abruptly to another room of the palace. There before them in image sat Shorr Kan.

He sat in the chair in his austere little room from which he had directed his mighty attempt to conquer the galaxy. Armed Cloud-men were around him. His face was marble-white and there was a blasted, blackened wound in his side.

His dulling eyes looked at them out of the stereo, and then cleared for a moment as they rested on Gordon. And then Shorr Kan grinned weakly.

"You win," he told Gordon. "I never thought you'd dare loose the Disruptor. Fool's luck, that you didn't destroy yourself with it—"

He choked, then went on. "Devil of a way for me to end up, isn't it? But I'm not complaining. I had one life and I used it to the limit. You're the same way at bottom, that's why I liked you."

Shorr Kan's dark head sagged, his voice trailed to a whisper. "Maybe I'm a throw-back to your world, Gordon? Born out of my time? Maybe—"

He was dead with the words, they knew by the way his strong figure slumped forward across the desk.

"What was he talking about to you, Prince Zarth?" asked Hull Burrel puzzledly. "I couldn't understand it."

Gordon felt a queer, sharp emotion. Life was unpredictable. There was no reason why he should have liked Shorr Kan. But he knew now that he had.

Val Marlann and the other officers of the *Ethne* were exultant.

"It's victory! We've wiped out the menace of the League forever!"

The ship was in uproar. And they knew that that wild exultation of relief was spreading through their whole fleet.

Two hours later, Giron began moving his occupation forces inside the Cloud, on radar beams projected from Thallarna. Half his ships would remain on guard outside, in case of treachery.

"But there's no doubt now that they've

actually surrendered," he told Gordon. "The advance ships I sent in there report that every League warship is already docked and being disarmed."

He added feelingly, "I'll leave an escort of warships for the *Ethne*. I know you'll be wanting to return to Throon now."

Gordon told him, "We don't need any escort. Val Marlann, you can start at once."

The *Ethne* set out on the long journey back across the galaxy toward Canopus. But after a half-hour, Gordon gave new orders.

"Head for Sol, not Canopus. Our destination is Earth."

Hull Burrel, amazed, protested. "But Prince Zarth, all Throon will be waiting for you to return! The whole Empire, everyone, will be mad with joy by this time, waiting to welcome you!"

Gordon shook his head dully. "I am not going to Throon now. Take me to Earth."

They looked at him puzzledly, wonderingly. But Val Marlann gave the order and the ship changed its course slightly and headed for the far-distant yellow spark of Sol.

FOR hours, as the *Ethne* flew on toward the north, Gordon remained sitting and staring broodingly from the windows, sunk in a strange, tired daze.

He was going back at last to Earth, to his own time and his own world, to his own body. Only now at last could he keep his pledge to Zarth Arn.

He looked out at the supernally brilliant stars of the galaxy. Far, far in the west now lay Canopus' glittering beacon. He thought of Throon, of the rejoicing millions there.

"All that is over for me now," he told himself dully. "Over forever."

He thought of Lianna, and that blind wave of heartbreak rose again in his mind. That, too, was over for him forever.

Hull Burrel came and told him, "The whole Empire, the whole galaxy, is ringing with your praises, Prince Zarth! Must you go to Earth now when they are waiting

for you?"

"Yes, I must," Gordon insisted, and the big Antarian perplexedly left him.

He dozed, and woke, and dozed again. Time seemed scarcely now to have any meaning. How many days was it before the familiar yellow disk of Sol loomed bright ahead of the ship?

Down toward green old Earth slanted the *Ethne*, toward the sunlit eastern hemisphere.

"You'll land at my laboratory in the mountains—Hull knows the place," said Gordon.

The tower there in the ageless, frosty Himalayas looked the same as when he had left it—how long ago it seemed! The *Ethne* landed softly on the little plateau.

Gordon faced his puzzled friends. "I am going into my laboratory for a short time, and I want only Hull Burrel to go with me."

He hesitated, then added, "Will you shake hands? You're the best friends and comrades a man ever had."

"Prince Zarth, that sounds like a farewell!" burst Val Marlann worriedly. "What are you going to do in there?"

"Nothing is going to happen to me, I promise you," Gordon said with a little smile. "I will be coming back out to the ship in a few hours or so."

They gripped his hand. They stood silently looking after him as he and Hull Burrel stepped out into the frosty, biting air.

In the tower, Gordon led the way up to the glass-walled laboratory where rested the strange instruments of mental science that had been devised by the real Zarth Arn and old Vel Quen.

Gordon went over in his mind what the old scientist had told him about the operation of the telepathic amplifier and the mind-transmitter. He checked the instruments as carefully as he could.

Hull Burrel watched wonderingly, worriedly. Finally, Gordon turned to him.

"Hull, I'll need your help later. I want you to do as I ask even if you don't understand. Will you?"

"You know I'll obey any order you

give!" burst the big Antarian. "But I can't help feeling worried."

"There's no cause to—in a few hours you'll be on your way to Throon again and I'll be with you," Gordon said. "Now wait."

He put the headpiece of the telepathic amplifier on his head. He made sure it was tuned again to Zarth Arn's individual mental frequency as Vel Quen had instructed. Then he turned on the apparatus.

Gordon *thought*. He concentrated his mind to hurl a thought-message amplified by the apparatus, back across the abyss of dimensional time to the one mind to which it was tuned.

"Zarth Arn! Zarth Arn! Can you hear me?"

NO ANSWERING thought came into his mind. Again and again he repeated the thought-call, but without response.

Wonder and worry began to grip Gordon. He tried again an hour later, but with no more success. Hull Burrel watched puzzledly.

Then, after four hours had passed, he desperately made still another attempt.

"Zarth Arn, can you hear me? It is John Gordon calling!"

And this time, faint and far across the unimaginable abysses of time, a thin thought-answer came into his mind.

"John Gordon! Good God, for days I've been waiting and wondering what was wrong! Why is it that you yourself are calling instead of Vel Quen?"

"Vel Quen is dead!" Gordon answered in swift thought. "He was killed by League soldiers soon after I came across to this time."

He explained hurriedly. "There has been galactic war here between the Cloud and the Empire, Zarth. I was swept into it, couldn't get back to Earth to call you for the exchange. I had to assume your identity, to tell no one as I promised. One man did learn of my imposture but he's dead and no one else here knows."

"Gordon!" Zarth Arn's thought was feverish with excitement. "You've been

true to your pledge, then? You could have stayed there in my body and position, but didn't!"

His excited thought raced on. "I've had my troubles here on your ancient Earth! They had me in a hospital for a while for amnesia because I couldn't remember *your* past."

Gordon told him, "Zarth, I think I can arrange the operation of the mind-transmitter to re-exchange our bodies, from what Vel Quen explained to me. Tell me if this is the way."

He ran over the details of the mind-transmitter operation in his thoughts. Zarth Arn's thought answered quickly, corroborating most of it, correcting him at places.

"That will do it—I'm ready for the exchange," Zarth Arn told him finally. "But who will operate the transmitter for you if Vel Quen is dead?"

"I have a friend here, Hull Burrel," answered Gordon. "He does not know the nature of what we are doing, but I can instruct him how to turn on the transmitter."

He ceased concentrating, and turned to the worried Antarian who had stood watching him.

"Hull, it is now that I need your help," Gordon said. He showed the switches of the mind-transmitter. "When I give the signal, you must close these switches in the following order."

Hull Burrel listened closely, then nodded understandingly. "I can do that. But what's it going to *do* to you?"

"I can't tell you that, Hull. But it's not going to harm me. I promise you that."

He wrung the Antarian's hand in a hard grip. Then he readjusted the headpiece and again sent his thought across the abyss.

"Ready, Zarth? If you are, I'll give Hull the signal."

"I am ready," came Zarth Arn's answer. "And Gordon, before we say farewell—my thanks for all you have done for me, for your loyalty to me!"

Gordon raised his hand in the signal. He heard Hull closing the switches. The transmitter hummed, and Gordon felt his

mind hurled into bellowing blackness. . . .

CHAPTER XXVIII

Star-Rover's Return

GORDON awoke slowly. His head was aching, and he had an unnerving feeling of *strangeness*. He stirred, and then opened his eyes.

He was lying in a familiar room, a familiar bed. This was his little New York apartment, a dark room that now seemed small and crowded.

Shakily, he snapped on a lamp and stumbled out of bed. He faced the tall mirror across the room.

He was John Gordon again! John Gordon's strong, stocky figure and tanned face looked back at him instead of the aquiline features and tall form of Zarth Arn.

Gordon felt a sudden dazing wonder that shook him to the depths of his being.

"Was it all a dream? Could it all have been only dream born in my mind?"

He shook that thought from him. He knew better. Strange and eerie as it all had been, it was no dream!

He stumbled to the window and looked out on the starlit buildings and blinking lights of New York. How small, cramped, ancient, the city looked now, when his mind was still full of the mighty splendors of Throon!

Tears blurred his eyes as he looked up at the starry sky. Orion Nebula was but a misty star pendant from that constellation-giant's belt. Ursa Minor reared toward the pole. Low above the roof-tops blinked the white eye of Deneb.

He could not even see Canopus, down below the horizon. But his thoughts flashed out to it, across the abysses of space and time to the fairy towers of Throon.

"Lianna! Lianna!" he whispered, tears running down his face.

Slowly, as the night hours passed, Gordon nerved himself for the ordeal that the rest of his life must be.

Irrevocable abysses of time and space separated him forever from the one girl he had ever loved. He could not forget,

he would never forget. But he must live his life as it remained to him.

He went the next morning to the big insurance company that employed him. He remembered, as he entered, how he had last left it weeks before, afire with the thrill of possible adventure.

The manager who was Gordon's superior met him with surprise on his face.

"Gordon, you feel well enough now to come back to work? I'm glad!"

Gordon had to speak carefully. He still did not know all that had happened to Zarth Arn in his body, during these weeks.

"Yes, I think I'd like to get back to work," he said slowly.

"Doctor Willis will have to okay you first, of course," said the other. "But he said when you left the hospital that it shouldn't take too long for you to recover completely."

Gordon remembered Willis, the company's head physician, who rose with a welcoming smile on his face when he entered.

"Gordon, how are you feeling? Has your amnesia all left you?"

Gordon nodded. "It has. I can remember my past perfectly now."

HE GATHERED quickly that Zarth Arn's ignorance of this world and time had caused him to be placed in a mental hospital for a short time, and that Willis had treated him there for amnesia.

"I'm mighty glad," Willis was saying. "I was afraid for a time that you'd end up like that girl in the hospital-room next to yours—you remember, the girl named Ruth Allen who'd lost her mind from shock and lay in permanent coma."

"I'm all right now, doctor," Gordon repeated steadily. "And I'd like to get back to work."

Work was all that kept Gordon from despair, in the next days. He plunged into it as one might take a drug or drink. It kept him, for a little of the time, from remembering.

But at night, he remembered. He lay sleepless, looking out his window at the bright stars that to his mind's eyes were

always mighty suns. And always, Lianna's face drifted before his eyes.

His superior commended him warmly, after a few days. "Gordon, I was afraid your trouble might have slowed you down. But you keep on like this, and you'll be an assistant-manager some day."

Gordon could have shouted with crazy laughter, the suggestion seemed so fantastic. *He* might be an assistant-manager?

He, who as prince of the Empire's royal house had feasted with the star-kings at Throon? He, who had captained the hosts of the Kingdoms in the last great fight off Deneb? He, who had unloosed destruction on the Cloud and had riven space itself?

But he did not laugh. He said quietly. "That would be a fine position for me, sir."

And then on an evening two weeks after his return as he sat sick with heartache in his rooms, there came a knock on his door.

Gordon was surprised when he found outside it a girl he had never seen before, a pale, dark-haired lovely girl who looked at him with strange shyness.

"My name is Ruth Allen," she began hesitantly, her eyes not leaving his face.

"Ruth Allen?" he repeated surprisedly. He had heard the name somewhere before.

Then he remembered. This was the girl Willis had mentioned, whose mind had been lost by shock and who had been lying in permanent coma in the same hospital where Zarth Arn had been confined.

"Why, I thought that they said you would never recover—" Gordon began.

Then his voice trailed off as he stared frozenly into the girl's pale, beautiful face.

Somehow it was as though that face had become transparent, as though through its features and through the dark eyes he saw another face, other eyes, another girl.

It was mad, it was insane. But not for his life could Gordon repress the hoarse cry that broke from his lips as he held out his hands toward the girl.

"Lianna!"

SHE stumbled forward, her arms went around his neck, her head was buried

against his cheek as she sobbed.

"John Gordon! You recognized me, even in this body! I *knew* you would!"

"Lianna, am I dreaming?" Gordon choked. "It can't be you, here in this time!"

"But it is!" she cried. Tear-glistening eyes looked up into his face—eyes that were different but that *were* Lianna's eyes.

"Zarth Arn did it, John Gordon!" she was crying. "He told me the whole story when he came back to Throon. Told me how it was *you*, in his body, whom I really loved!"

"And when I told him that I still loved you, the real you, and always would, then Zarth Arn with his apparatus sent me back to your time as I begged. He had known of the girl here whose body was healthy but whose mind was lost forever. He sent me back into her body, so that I could come to you!"

Gordon was stunned, overwhelmed. "Good God, Lianna, you can't do this! Your own body—"

She smiled up at him—Lianna's smile! "The body of the Princess Lianna of Fomalhaut will lie forever in coma in a vault in Throon. What are differences of body to us who each love the real other?"

"I can't let you do it!" he cried wildly. "You've got to go back!"

Her old imperiousness flashed. "I am here to stay, and I will not let you say any more about it!"

Tears came to his eyes, as he gathered

her more tightly in his arms and pressed his cheek against her soft hair.

"Lianna! Lianna!"

Later, sitting by his window as twilight deepened to night, she told him of Zarth Arn's return to Throon, of his amazement and shaken gratitude when he learned of what Gordon had done in his body.

"He wept when he told me of it, John Gordon! He could not speak, when he learned how you had fought for the Empire."

She looked up at the starry heavens. "They are there now at faraway Throon, Zarth and his Murn, Jhal Arn and Zora, all of them. What are time and space but distances?"

Gordon voiced the one doubt that still troubled his deep happiness.

"But Lianna, in that other age you were princess of a star-kingdom. This old Earth may seem dull and half-barbaric to you."

She smiled up at him. "No, John Gordon. It is your world and mine, now. And it seems a quaint and quiet world for lovers, after the wars and intrigues of the star-worlds I knew."

Gordon made no further protest. He was too content to sit with her in his arms, looking out across the lights of New York at the blaze of the galaxy across the sky.

He had sought adventure but he had found far more. Across two hundred thousand years he had found and won a bride, a daughter of distant suns, a princess of the star-kingdoms yet to be.



INSIDE THE EARTH



WHAT is it like in the interior of the earth? Man's ignorance of this subject is indeed vast. Though he has ascended several miles above the surface of the earth, his direct observation of conditions inside the earth has extended only a little over a mile. The small knowledge he has derived from his burrowings into the earth has been augmented by a study of earthquakes, volcanoes and the like, and the laws of gravity. He has reached certain conclusions concerning the interior of this planet on which we exist; these conclusions are largely conjecture, the facts available being insufficient for certainty.

It is supposed that the outer crust of the earth, consisting of rocks and metals in various states of mixture and chemical fusion, extends for about

eighteen hundred miles. The core of the earth is a molten mass of metal, compressed to fifty percent of its normal liquid volume by the tremendous pressure from without.

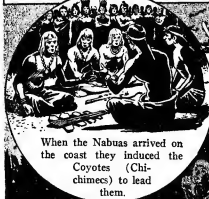
Judging by the fact that in nearly all deep borings, the temperature increases about one degree for every sixty feet, and *assuming* this variation remains fairly steady, it seems reasonably certain that the temperature at the center of the earth is enormous. Yet the radiation from this terrific heat proceeds so slowly, because of the heavy blanket of rocks and metals which make up the crust of the earth, that it has little effect upon the temperature at the surface, which is determined almost entirely by energy received here from the sun.

—Mildred Murdoch

SCIENTIFIC



When the Nahuas came to the Quinames, perhaps the most scurvy trick of all time was played! It is said by Ixtlilxochtl that the Nahuas were welcomed at first, but then enslaved. This charge of slave-making may be the reason for the bitterness of the attack of the Younger and Elder Twin and the exultation of the Chichimec because of victory.



When the Nabuas arrived on the coast they induced the Coyotes (Chichimecs) to lead them.



We know that their first great conquest was "The City of the Seven Caves," which we might take for granted was in the Land of Maize. Furthermore, we might judge from other fragments of earlier history that the City of the Seven Caves was a Quiname stronghold, since both "seven" and "caves" are often connected with the seven tribes of Quinames, or Votan's Chanes, who survived the Flood. It was from this bloody beginning that the great victories of the Chichimec stemmed.



In spite of their victories, the Nahuas and the Coyotes quarrelled in their capital city of Tollan, intrigue followed intrigue and resulted in rebellion that dispersed the Nahuas for the final time. Some remained in Tollan and others, six tribes, made their way to Mexico where they "found their dawn." From these tribes came "Tula, the Magnificent," the stronghold of Quetzalcoatl's religion.



MYSTERIES

THE ATLANTIC EMPIRE OF THE QUINAMES

By L. TAYLOR HANSEN

This ancient nation's history is one of the great lost mysteries

ARCHAEOLOGY, the study of long-lost civilizations, is always trying to untangle snarled threads, separate the confused elements, and then follow the oldest back as far as possible. In America, this has been a most hopeless task because the history of The Nahuas stopped the scholar. In the labyrinth of Nahua Legend he lost his way, and thereafter, gave up the struggle. The reason for this is that every investigator, including the present writer, has tried to follow the Nahua migration by starting them out in the western portion of North America somewhere near the Aleutians where all well-regulated migrations should start, according to the theory of Asian origin at present in the highest favor. The result is the same, even though we move the start of that migration lower and lower down along the Pacific coastline. They end out in the center of the Atlantic Ocean! Then the discouraged investigator, figuring that they couldn't have known east from north or south, when they kept insisting upon an eastern direction, throws away his papers and decides to "forget it."

Yet when you have once been bitten by the archaeology "bug" you can't "forget it." Perhaps like the present investigator, you then begin to pile all the evidence you can lay your hands on which will hint of Nahua origin, because once you have singled out the Nahuas, you can find the non-Nahua elements of a mass of legends, and thus reach behind the seeming preponderance of Nahua blood and Nahua civilizations.

Perhaps, for the present writer, the strongest hint was given by Bancroft in his description of Nahua dress.¹ The definite suggestion of Malayan

origin here, as well as the fact that the Aztecs, one of the leading Nahua nations, spoke of the fact that they once had woven garments before coming to Mexico, but since they had to cross certain rivers during the migration to Mexico, and they used their maxtlis and mantles in place of ropes and rafts, they then had to wear the huipiles of the women, leaving them only their naguas (undergarments). In commemoration of this event, they discarded the Maxtli and wore the huipil with a mantle, for their national costume. This would seem to suggest a southern origin for the Aztecs, and through the use of the maxtli, definitely connects them with the Nahuas.

Once the hint of Malayan origin had taken root, one can make a map of the Nahua migration backwards, starting from their probable landing upon the Northern shore of South America or the western shore of Central America where the earliest hints of Nahua appearance seem to point.²

² *The Nahua Migration is as follows: From Tlapallanconco or "Little Tlapallan" about sixty leagues east of Huehuc Tlapallan they traveled:*

Twelve days, direction not given. Came to "Great and sandy" where they remained four years.

Twenty days, direction was east. Came to "Much seashore. Remained eight years.

Twenty days, direction not given. Came to "Long coastline," where were "Many Islands." Remained five years.

Eighteen days, direction was east. Came to "Tox Pan," where they lived five years.

Twenty days, direction was east. Came to "rough coast with many inlets," where they remained six years, suffering great hardships because land tips were so small they had "to use boats to pass from one place to another" (Little room for food, but the long journey reaching it shows they had no choice and were in a desperate plight).

Eighteen days, direction not given. A son born to the chief here named the place. A binding of fifty-two years took place here from the time their disastrous war began. Remained seven years.

Eighteen days, direction not given. Son born here to a leader. Remained six years. Place named Totapan.

(Footnote continued on page 168)

¹Quotation from Bancroft: *Nat. Races Vol. II. pp 366* "The maxtli was about twenty-four feet long and nine inches wide, and was generally more or less ornamented at the ends with colored fringes and tassels, the latter sometimes nine inches long. The manner of wearing it was to pass the middle between the legs and to wind it about the hips, leaving the ends hanging one in front and the other at the back, as is done at this day by the Malays and other East Indian natives. It was at the ends usually that the greatest display of embroidery, fancy fringes and tassels was made."

The migration backward leads first south and then straight west toward the mystery of the Indian Ocean. The distances depended the amount of load a long canoe carried, and the number of able-bodied men used to propel the oars. From the Mexicans (Aztecs) we learn that the number of tribes which started from the island homeland, or the place to the east of Huehuetlapallan were fifteen, but only six finally reached Mexico.³

Thus having solved, albeit in the most unsatisfactory and haphazard fashion possible, some of the mystery of the Nahuas, it becomes possible to single out the non-Nahua elements of ancient legends and grope behind the Nahuas for the historical facts of lost millenniums. In this, we find our greatest hints from the Nahuas themselves. Hueman, the great Nahua orator who started them out on their migrations, made certain statements concerning the eastern land to which he urged them to go. He described it as having been long ruled by a rival power, The Quinames,⁴ who had apparently established colonies there, and who, together with their neighbors The Chichimecs, had managed to keep the Nuhuas out. Were the "fierce" Chichimecs the aboriginal inhabitants? It would seem so, from the fact that The Quinames had established coastal colonies, and because later, The Mexicans always spoke of wild tribes, especially wild hunting tribes who lived to the north and dressed in skins, as "Chichimecs."

Hueman has given us further hints in his statement that since The Flood crippled the Quiname homeland, and not only drowned many of her coastal colonies, but also the bulk of The Chichimecs as well, the time was most propitious for a Nahua invasion. From Hueman's oration, we learned that the Quinames were a powerful empire before The Flood, at which time they had American colonies, that they had never completely subjugated The Chichimecs, and that they were the people of The Venus Calendar, since he says that the Evening Star has always favored them.

SEARCHING the legends for the name Quiname, we find that they are often spoken of as the giants who lived before The Flood.⁵ Knowing the Amerind love of double-meanings and allegorical stories, no true red-skin sage would take this literally. Giants suggest immense power in an enemy, and that is exactly what they were, as the stories of them have largely come down through the folk memory of their enemies, The Nahuas. Yet we do have other fragments, which fall into place. From The Popul Vuh we learn that the enemy which drove the Quiches (probably a Nahua-Chichimec cross) out of their home among the marshes in the highlands called Utatlan, was without doubt Xibalba, which they later humbled, but which may have also been responsible for their final dispersal. Searching for further information about Xibalba, we begin to suspect that this must have been a Quiname colony of Central America,

for the Xibalban monarch is said to have claimed that some of the ancients who had lost their lives by being drowned during the flood, were of god-like qualities, a statement which the two leaders of Utatlan find particularly objectionable, and therefore make it the basis for the reason that they began to "plot against his power and wealth."

An important Nahua document which was copied by Ixtlixochitl, and quoted by Brasseur, but which has since been lost, says that The Flood which closed the second age of the world, transferred most men into dogs.⁶ This is curiously familiar to the collector of Northern Indian legends, where Coyote almost always is the miraculous survivor, along with the Elder Twin, of The Great Flood. Bancroft has suggested that this is the etymology of the word "Chichimec," which is a particularly enlightening suggestion.⁷ Espe-

(footnote continued from page 167)

Twenty-eight days, direction not given. The place named Tepella. Remained seven years. (The longest jump of all.)

Eighteen days, direction not given. The place named Mazatepec. Remained eight years.

Eighteen days, direction not given. Place named Zihucocuatl. Remained eight years.

Twenty days, direction is north, or "to the northward." Place named as Yxtachuezuca. Remained twenty-six years. (This was on the continent?)

Eighteen days, direction not given. Came to Tulan-cingo or Tulan-zinco, "The City of the Seven Caves." Here they built a temple large enough to contain all of the tribes at once and remained for eighteen years.

They then moved their capital to Tollan.

The third year of their stay at Tulancingo completed an "age," or 104 years from the day that they had left their unhappy homeland.

³ A good summary of Gemelli Careri Manuscript and that from the Boturini Collection with interesting notes are to be found in Vol. 11 of Bancroft's *Native Races*.

⁴ Ixtlixochitl says The Quinames were descended from the Chichimecs. If the Chanes held their colonies long enough to allow much amalgamation, such a confusion seems inevitable. Yet it seems to point to a long period of colonization.

⁵ Bancroft reads into the stories of the Quinames, an ancient and powerful civilization, which had long inspired fear and hatred. I believe that in this he was entirely right. Their insolence, pride, wealth, and even their addiction to drink and other vices seem to betray a people of ancient and fixed rituals, softened by too much luxury.

⁶ The *Codex Chimalpopoca*.

⁷ Quotation from Bancroft: "Chichimec or 'dog,' a transformation which may not improbably have something to do with the origin of the name Chichimecs, a name applied to so many tribes in all parts of the country. The *Codex Chimalpopoca*, however, speaks also of a transformation into monkeys as a result of a great hurricane."

cially so, as The Popul Vuh insists that one of the original Nahua leaders, Hunahpu Utiu (Shooter of the Blowpipe at Coyote) killed Coyote after inducing him to lead him to The Land of Maize,⁸ while the Quiche tradition also says that after The Flood, men were transmuted into dogs.

Legends disagree as to whether the "giants" were entirely destroyed by The Flood. The Tupis of Brazil say that there were two floods, each one submerging an island and desiccating others. The old Maya tradition gives three successive floods, each one desiccating progressively, portions of an old Caribbean land and causing successive migrations, the last one heling the most severe and catastrophic. Peru has a legend that the "giants" who built the great megalithic walls, of the most ancient ruins, were destroyed by a rain of molten metal from the heavens.⁹ The Tezcucan historian Ixtlixochitl, says that the "giants" survived three destructions of the earth, the first by flood, the second by earthquakes in which the highest mountains were toppled, and the third by a hurricane. Tlascaltec legend says that the survivors of this destruction became monkeys (Nahuas?).

There is an interesting legend around Cholula Mexico described by the early writers which adds much to our picture. According to Pedro de los Rios who has recorded it, "giants" inhabited the world before The Flood. Most of them were turned into fishes at this time, but seven brothers survived by closing themselves into great caves in a mountain called Tlaloc (Mayan rain-god, and Nahua word meaning fire-mountain). When the waters had gone down one named Xelhua, surnamed The Architect, came to Cholula and began to build an artificial mountain as a tribute to Tlaloc and as a refuge in case of a second flood. The bricks for the monument were made in Tlamanalco at the foot of Cocotl (Snake-god) and passed by means of a long line of workers. The jealousy of other gods were aroused, and before the great monument could be finished, a rain of molten metal descended upon the heads of the builders. The likeness of this legend to those of Votan, The Great Architect who survived The Flood with his fleet of Seven tribes of Chanes (Snakes) is most arresting, as is also the legend preserved by the North California Tahoe Indians who claim to be the people whom the "Great Architect" enslaved to build his pyramid, and from whom they escaped during the second rain of fire, and its flood. A Chiapas legend also confirms these facts, giving the name of the survivors of The Flood as The Quinames. The Popul Vuh says that after the

hurricane, men were turned into monkeys.

NOW let us see what we can make of this allegorical story, the only method by which the red man will pass on his history, leaving the obvious tale for his children, and the hidden meaning for the initiated. It is only by many fragments that we, the later uninitiated can get a glimpse of the true meaning.

First, we have the Nahuas arriving upon the coast of the Americas and inducing Coyote to lead them to "The Land of Maize." As we also have the knowledge that their first great conquest was "The City of the Seven Caves," we might take for granted that this was located in the Land of Maize. Furthermore, we might judge from the other fragments of earlier history that the City of the Seven Caves was a Quiname stronghold, since both "seven" and "caves" are often connected with the seven tribes of Quinames, or Votan's Chanes, who survived The Flood.

That the Nahuas later had a falling out with the Coyote Totem, and in the ensuing war, defeated The Coyotes (who had survived The Flood, probably a leading branch of The Chichimecs) is evident from the name of the hero whose name means "Shooter of The Blowpipe at Coyote." The blowpipe was apparently a new weapon to the natives. Its origin is apparently Malayan and present distribution would suggest that it entered the American continents, particularly the South American continent from the direction of the Malay Islands where it is today the main weapon.

From The Popul Vuh we see that the Nahuas were not content with their gains, but plotted against the ancient empire, or the fragments of the ancient empire of The Chanes, or Serpents, which perhaps existed at that time in the region of Central America. In this war, various animals (Chichimec Totems) took various sides. As the different games of ball must be interpreted as battles, the struggle against the descendants of The Quinames must have gone on for generations, but finally ended in the defeat and dispersion of the Nahua tribes who took part, and the burning of the two Nahua chiefs in The Sacred Fire.

The Nahuas then established their second capital, probably at Tollan, which may have been in Central America, since they are said by The Popul Vuh to have lived near their elder half brothers, whose names, translated into the Mayan language means "Monkey." Was Chimu 1, or the Early City of Chan-Chan drawn into this struggle? Northern legends would make it seem so. These second pair of twins to carry on the struggle against the old power of Xibalba, according to the Popul Vuh, were the sons of the Nahua chiefs by a Xibalban mother, and for this reason were probably frowned upon by their elder brothers. What Xibalban colony was over-run by the defeated Nahuas? We might guess several locations but they would be but guesses. In time this power (of amalgamated parentage,) became strong enough to challenge and defeat Xibalba. Yet in

⁸ The *Codex Chimalpopoca* gives the credit to *Ascatl*, the Ant, for leading the Culture-hero *Quetzalcoatl* to the "mount of our subsistence" for maize.

⁹ For Peru legend of Giants see *Torquemada* and *Veytia*. Many South American natives credit "giants" with the megalithic walls. This may be only an attempt to explain the immense size of the blocks with which they have been built.

their capital of Tollan, the victors quarrelled, intrigue followed intrigue and resulted in rebellion, the Nahuas then being dispersed for the final time, some remaining in Tollan, and others, six tribes in number, making their way to Mexico where they found their dawn." From one of these came "Tula, The Magnificent," that golden empire which was the stronghold of Quetzalcoatl's spiritual religion, and which the sacrificial god Huemac took back again, bringing with his rule the terrors of the old bloody rites during either the fifth or sixth centuries A. D.

Thus we see that the Nahuas landed indeed at a propitious time. Since most of the legends say that the hurricane was followed by the advent of monkeys, we see that the Monkey-worshipping Nahuas arrived shortly after the Northern Twins closed in on the crippled power of The Quinames, probably storming stronghold after stronghold which fell easily since the ancient nerve-center had been submerged by The Flood.

Ixtlilxochitl says that the Quinames at first welcomed the Nahuas but later enslaved them. The charge of slave-making is often brought against the ancient easterners, and this may be the reason for the bitterness of the attack of The Younger and Elder Twin and the exultation of Chichimec victories. For we cannot doubt that the "Twin" complex is really Chichimec, taken over by the Popul Vuh, and assigned to later heroes of Nahua origin. Perhaps the Quinames did enslave some early arrivals of the Nahuas, but the westerners, with the help of the natives,

finally conquered the great Land of Maize and The City of The Seven Caves, although Xihualba resisted for a long time.

Thus we have seen that the Elder and Younger Twin settled an old score after The Flood, perhaps with the help of some new arrivals who were later to over-run them. But the important point is that we seem to have travelled through the labyrinth of Nahua legendary history to the War of The Twins upon The Great Dragon. Is it possible to go behind the green wall of The Flood, and to catch a glimpse of the antediluvian world, as The Popul Vuh, which has thus proven itself by internal evidence, to be a Nahua Book, has helped us to gain a view of the dying struggles of The Great Colossus of The Atlantic? In the next article we shall try to locate definitely The Land of Maize, and gain a glimpse through countless milleniums of obscuring time-veils, down the vistas of the past to the day when The City of The Seven Caves was a power of which the Nahuas were well aware in their capital of Huehue Tlapallan.

REFERENCES

Torquemada: Monarq. Ind. (very hard to obtain)
Veytia: Hist. Ant. Mej. (very hard to obtain)
Bancroft: Native Races Vol. III & V.
(Bancroft gives good summary of both Mexican and Nahua migra.)
Camargo: Hist. Tlax. in Nouvelles Annales des Voy. 1843 (For Mexican Migration.)
Brasseur de Bourbourg: The Popul Vuh. (later translations of this old book are now obtainable.)

Vignettes

OF FAMOUS SCIENTISTS

By ALEXANDER BLADE

Charles Proteus Steinmetz

He was the electrical wizard of all time!

CHARLES PROTEUS STEINMETZ was born at Breslau, Germany, April 9, 1865. His father was an expert lithographer and gave his son an excellent education. Steinmetz entered the University of Breslau at the age of seventeen and specialized in mathematics, electrical engineering and chemistry. These subjects were exceptionally fascinating to him.

While a student at the university—like very many young Germans of his time—he became interested in the theories of socialism, as they had

been set forth a generation before by Karl Marx, and advocated them boldly, yet not fanatically. In his last and graduating year he undertook temporarily the conduct of a socialist periodical, while its editor was serving a term of imprisonment for expressions regarded by the authorities as seditious, and himself incurred their displeasure. Anticipating arrest, he managed to get across the border into Austria, and from there went to Switzerland, where he managed to earn his living by tutoring and in literary work at Zurich, at

the same time attending the lectures at the technical school there, where he became acquainted with an American student. When his friend left for home at the end of his course, Steinmetz decided to go with him. Traveling by the most inexpensive conveyances, they took steerage at Havre, and landed in New York in June, 1889. Steinmetz had but ten dollars in his possession, and very little baggage, and was threatened with deportation as liable to become a public charge, because of his unfortunate physical disability—curvature of the spine. His companion, however, was better fixed financially, and was able to show the authorities a good sized roll of money, which he insisted was joint property. This resulted in the admission of Steinmetz. His first act was to take out his preliminary naturalization papers, which he completed as quickly as the provisions of the law allowed.

Two weeks after landing he found employment as a draftsman in the firm of Rudolf Eickemeyer and Osterheid at Yonkers, manufacturers of general electrical supplies and appliances, who were beginning to specialize in the construction of electric cars. Here the value of his inventive mind and fine education was quickly recognized, and while learning to speak English he made himself so useful to his employers that when the latter, in 1893, sold their business to the General Electric Company, Steinmetz, by special agreement, went with it as a part of its "good will," to the Lynn works of that organization. In the following year he was transferred to the plant at Schenectady where he remained for the balance of his life, becoming almost at once its highly valued consulting engineer. After 1902 he served also as professor of electrical engineering at Union College. He soon became recognized as one of the outstanding electrical geniuses of America. Besides a large number of scientific papers he was the author of a number of standard textbooks. He died at Schenectady, New York, October 26, 1923.

STEINMETZ regarded his three greatest contributions to electrical science as: 1. His investigations on magnetism resulting in his discovery of the law of hysteresis, which enabled losses of electric power due to magnetism to be accurately forecast before starting the construction of motors, generators, transformers, and other electrical apparatus employing iron. 2. The development of his symbolic method of calculating alternating-current phenomena which simplified an extremely complicated field, understood by few, so that the average engineer could work with alternating-current, an accomplishment which was largely responsible for the rapid progress made in the commercial introduction of alternating-current apparatus. 3. His investigation of lightning phenomena which resulted in his theory of electrical transients, and opened the way for his development of lightning arresters to protect high-power transmission lines.

The scientific achievement with which his name

will perhaps be most associated is the explanation of the phenomenon of hysteresis in metals, and particularly of that variety of it caused by magnetism. Hysteresis was first observed by Warburg in 1881, and later independently by Ewing in 1885. These investigators observed that when a rod of iron had been converted by induction into a magnet, by being surrounded by a metallic coil or helix through which a current of electricity was passing, when the current was decreased in strength, or reversed, or stopped, demagnetization did not immediately decline or disappear; and that when interruption or change occurred in the current an appreciable time elapsed before the effect that should have resulted was produced. In other words there was a "lag" of effect, which was believed to be due to friction in the molecules of the bar, which revealed itself in a rise of its temperature. The ultimate effect is a loss of power which, in most forms of electrical machinery or installations, amounts in a short time to a notable decrease of efficiency. Steinmetz made an exhaustive study of this phenomenon, and in the end was able to devise means by which the most of the losses could be obviated.

In the early years of the science or art of electrical engineering, direct current was universally employed. But as it advanced, it quickly became evident that advantages of importance could be gained by employing alternating current, especially in long telegraph, telephone and power transmission lines, and ocean cables; and for all types of installations which operate most efficiently under a high voltage. But the laws under which the two varieties act, and the expression of them in formulae, are very different, those for the alternating or impulse current being much more complicated. Steinmetz undertook the simplification of these, and being a mathematician of rare ability he succeeded to a very remarkable degree. Of the three contributions previously mentioned, he regarded this latter as his chief accomplishment.

STEINMETZ must be ranked also among the great inventors, having taken out some 200 patents including improvements on generators, motors, transformers, in electro-chemical operations, and the invention of the induction regulator, the method of phase transformation and the metallic electrode arc lamp.

Throughout his life he retained his belief and interest in socialism as a theory of communal life, and practiced it. While his views on the subject were definite and strong, they were never extreme, nor fanatical. He frankly admitted that the world was not yet ready for the system, and would have to improve considerably in morality before it would be. He never ceased to be thankful, and to give expression to it, that he had been permitted to become a citizen of a land where views such as he held could be retained and expressed freely, without incurring political persecution and loss of standing as a citizen and patriot.

SPACE SHIPS LIMITED

IV. Radiation

By JACKSON ROSS

SPACE ships out from earth are subject to influences that they would never meet if they had stayed under the protection of the thick mantle of air which envelopes this globe. One of these influences is radiation. Harmful radiation places an enormous bandicap upon space flight that may be impossible to overcome.

Every second of your life on earth, streams of radiation are striking your body. In many cases such streams are passing through you—though you are unaware of that fact. Except in rare instances, this radiation is harmless. It may even be beneficial. You are aware only of the visible portion of the sun's radiation, which you call "light."

You are not aware of the ultra-violet rays, except as you realize that they sunburn you if you get too much of them. Nor are you aware of the infra-red, except as it feels hot. As you lie in the sunshine on a beach you do not realize that the heat you feel mostly comes from the infra-red rays which are too long to be seen, and the tan you get comes from the ultra-violet rays which are too short to be seen.

As you and I walk down the street a radio wave may be bouncing off our bodies or even passing through us. We do not know it. Yet those waves can be detected easily by an instrument which is commonplace in 30,000,000 homes—the radio. Countless other rays may be passing through us. We were unaware of any of these a few years ago. But today we have discovered some of them.

Very important among these mysterious rays are the so-called "cosmic rays" which are so powerful that they may be detected in a deep mine, or can pass through many feet of lead. What cosmic rays are, we do not know. It appears that they originate deep within our own galactic system, popularly known as "the Milky Way," of which our sun is a part. We do not know what they mean. We do not know very much about them at all.

What we do know, however, is that scientists all over the world—in Russia, in eastern Europe, in the United States—are studying them intensely. Perhaps in the near future we shall read that these powerful rays have been harnessed, opening up vast new energy reserves to mankind.

Now most of the natural rays that man encounters upon this earth are harmless to him. Although the sun's rays may burn him severely or even kill him, yet he cannot live without them. The cosmic rays tear through his body at ferocious speeds, yet he does not know it. He can only discover that fact by complex instruments.

It is easy to see why the natural rays are harmless to our flesh. As life developed upon earth, only that kind could live which was com-

pletely *sympatico* to the rays. If the rays were harmful to any mutant, the mutant died. A few cave creatures, of course, are especially sensitive to sunlight. Yet even these are variations of surface life forms which are not susceptible. No life could ever flourish on earth which was sensitive to the ever-present cosmic rays. No part of the earth which cosmic rays cannot reach, in fact, is habitable.

While natural rays on earth are not harmful, the ingenuity of man has developed rays which are. X-rays, in excess, are killers. The co-discoverer of radium itself, Pierre Curie, died from its radiation. The atomic materials cooking in the uranium piles of Hanford, Oak Ridge, and New Mexico are so desperately poisonous that exposure to their rays for a fraction of a second can mean death.

There are a billion suns in the universe. Each is burning to its destruction and each has its own formula of destruction. Each is an enormous and complex atomic pile—an atomic furnace of unimaginable proportions.

Those suns that we can see in our telescopes radiate light. On infra-red-sensitive film we can detect others which are extremely hot yet do not radiate rays in the visible spectrum. These are the dark suns. Their materials may be so complex that we have no standards on earth to imagine what they may be. Some are so heavy that a handful of their substance would weigh a ton on earth.

Where the suns are disintegrating, atomic rays are going forth. It would be folly to claim all of them as poisonous, but similar folly to claim that none are. Probability, however, tells us that most of them are. Their burning means the by-products of atomic disintegration.

Our own sun is a small and middle-aged star. Spectrographic and other studies indicate the materials of other stars to be more complex than our own sun. It is reasonable to expect, therefore, that their radiation is more complex. And wherever atoms are disintegrating, there the deadly rays exist.

In summary, then, life has developed on earth only insofar as the formula of our own sun's rays permitted it to develop. It is inconceivable that the rays of any other sun would be made up of precisely the same formula. It is probable that under any other ray formula, life as we know it cannot exist.

Now what does all this mean to space travel?

Simply that on other planets, in other planetary systems, in space itself, the rays of death wait for human travelers.

OUT of our protecting envelope of air, man is helpless before them. He cannot even know

what they are. Perhaps even the cosmic rays, which are harmless when filtered through the gases of our atmosphere, would strike death to anyone exposed to them outside it. But even if the cosmic rays would be harmless, the death rays await elsewhere.

No space ship could possibly be protected against them. Think of cosmic rays penetrating 50 feet of lead. What protection could we possibly have against them if they were harmful? Yet in space, away from the solar system, our celestial travelers would be subject to unnumbered forms of unknown radiations.

These rays do not harm us on earth for two reasons.

First, our protecting envelope of atmospheric gases is hard to penetrate. It is a very dense and heavy envelope. Over every square yard of the earth's surface it bears down with a weight of nearly 10 tons. A square yard bundle of rays, therefore, has to penetrate through 10 tons of gases before it can reach the surface. We are generally unaware of the air's density because we walk through it, run through it, and especially because we see through it. We call it "transparent." But all that transparency really means is that this gas can be penetrated by radiation in a rather narrow range of the spectrum, and that, through evolution, our eyes have developed a sensitivity to a small segment of this narrow spectrum of radiation. We "see" within this range, and the atmosphere appears transparent. Eyes from other planets, accustomed to seeing a slightly different form of radiation, or in a different spectrum range, might find our atmosphere absolutely opaque. The importance of our atmosphere is just this—that it filters out most other forms of radiation—especially the harmful forms. These other forms would be met by any space ship unprotected by an atmosphere.

The second important reason why the rays from other suns do not harm us is that they are so distant. Some suns are so huge that if our sun were at the center of them, the earth would still revolve within their outer shell. Yet withal this huge size, they are so far away that but an infinitesimal part of their radiation can reach us.

Radiation, then, appears to rule out travel near other suns. Does it definitely bar travel within our own solar system? Certainly not by itself. All evidence suggests, on the contrary, that while unfiltered sun rays would be extremely harmful, we might be able to overcome them if we did not approach closer to the sun than, say, Venus. After all, the materials that we would build our space ships out of are sun materials. They are capable of withstanding, or reflecting, most of the sun's rays.

We cannot say for sure, but for this reason it would seem that travel within the solar system might be possible so far as the hazards of radiation alone are concerned.

(Concluded on page 178)

SMOOTH SAILING WITH
ASTHMADOR

THE LEADING
POWDER
CIGARETTE
OR PIPE MIX

INHALANT
TREATMENT

AT ALL
DRUG
STORES

If summer means agony to you — if pollen-laden breezes aggravate your bronchial asthma — take a new lease on life with Dr. R. Schiffmann's ASTHMADOR. Just ignite ASTHMADOR powder, or an ASTHMADOR cigarette, and let those pleasant, aromatic fumes penetrate congested passages. Notice how they help make breathing easier, aid in reducing the severity of your paroxysm. Enjoy summer vacations — you can get ASTHMADOR anywhere — take it everywhere. No costly sprays to buy, nothing to take internally. No wonder Asthmatics have made ASTHMADOR the leading inhalant treatment! Sold under a money-back guarantee. You can't lose — and you've a lot of welcome relief to gain!

ILLUSTRATED COMIC BOOKLETS
THE KIND MEN LIKE!
(VEST POCKET SIZE)
They are loaded with rare cartoons. Full of Fun and Humor.
20 DIFFERENT booklets sent prepaid for \$1 in plain wrapper. Sorry... no C.O.D.'s.
GRAYCO, Dept. 1098, Box 620, G.P.O., N.Y.C.

Learn Profitable Profession in 90 days at Home
Men and Women, 18 to 50
Many Swedish Massage graduates make \$50, \$75, or even more per week. Large full time incomes from doctors, hospitals, sanatoriums, clubs or private practice. Others make good money in spare time. You can win independence and prepare for future security by training at home and qualifying for diploma. Anatomy Charts and 22 nice illustrated Book FREE — Now! The College of Swedish Massage, Dept. 753-K, 100 E. Ohio St., Chicago 11

Bar Bells
...at Factory Prices
WRITE FOR FREE BOOKLET AND PRICE LIST
\$8.95 up
INDEPENDENT IRON WORKS
2416 East 23rd Street, Dept. 28
Los Angeles 11, Calif.

LAW
STUDY AT HOME for Personal Success and LARGER EARNINGS. 38 years expert instruction—over 108,000 students enrolled. LL.B. Degree awarded. All text material furnished. Easy payment plan. Send for FREE BOOK—"Law and Executive Guidance"—NOW

AMERICAN EXTENSION SCHOOL OF LAW
Dept. 81-R 646 N. Michigan Ave. Chicago 11, Ill.
BE A DETECTIVE
WORK HOME or TRAVEL. Experience unnecessary. DETECTIVE Particulars FREE Write to
GEO. Z. D. WAGNER, 125 W. 86th St., N. Y.

DISCUSSIONS



AMAZING STORIES will publish in each issue a selection of letters from readers. Everybody is welcome to contribute. Bouquets and brickbats will have an equal chance. Inter-reader correspondence and controversy will be encouraged through this department. Get in with the gang and have your say.

Address Your Letters to:

AMAZING STORIES "DISCUSSIONS," ZIFF-DAVIS PUBLISHING CO.
185 North Wabash Avenue, Chicago 1, Illinois

THE SHAVER MYSTERY CLUB

Sirs:

We would like to have all readers of the "Shaver Mystery" who have anything to add to it by their own personal experiences, to get in touch with us. Only by diligent research into things that *happen* can we hope to prove or disprove all or any part of the Mystery. And to do this we need the cooperation of everyone, and by everyone we mean every reader of AMAZING STORIES who finds Mr. Shaver's stories food for thought. To you readers we can only say, please don't let us down. We want, and need your help. Any information you may have, whether it is of a personal or otherwise nature, will be appreciated.

Also, the first issue of the club magazine is now being distributed, containing the first compilation of data at our disposal. It might be well to point out that only people actively interested in the Shaver Mystery, and members of the club, can and will receive issues of this magazine. There are no dues in the club, only subscription to the club magazine is required. This money (\$1.00 for two issues) is used to print the magazine, which we have found is no easy task in these price-inflated days. We can accomplish our goal in trying to solve some of the aspects of the Shaver Mystery only if every reader is willing to do his share. Mr. Shaver has generously devoted a great deal of his time, and the intimate knowledge he has, to start the club and help present the truth as he knows it. But the rest is up to you readers. May we hear from you soon?

Chester S. Geier,
President,
The Shaver Mystery Club,
2414 Lawrence Ave.,
Chicago 25, Ill.

We've read the first issue of your little magazine, Chet, and we think you did a fine job. It is the best fan magazine we've ever seen, and it must have cost you a young fortune! Back him up, you Shaver fans. This lad's really in there pitching!—Ed.

SHAVER'S GRAVITY

Sirs:

I have a question concerning Shaver's theory of gravity. Assuming, for this argument, that his theory is true, it follows that any object which has a given horizontal (top) area would weigh the same as any other object of the same horizontal area, for it would intercept the same quantity of "exd" per unit time. But two equal blocks, of wood and iron, would certainly have a different weight.

Also, using this theory, let us take, as an example, a long, rectangular rod of metal. It would seem that it would weigh much more lying horizontally than it would standing on end. But this can be refuted easily by means of a balance scale, using the same weights on the other pan. Now, sir, what's the answer?

Bill Womack,
2976 Third Ave.,
Huntington, W. Va.

Gravity, says Shaver, is the FRICTION of "exd" passing through matter. Not the surface pressure as you assume. Wouldn't there be more friction through a denser object? Also, wouldn't the total amount of friction depend on the mass of the object, rather than its dimensions? You have divorced, in your mind, Shaver's gravity theory from that of orthodox science. Shaver's only addition to the existing theory is the NATURE OF THE FORCE that causes gravity. Science today considers gravity a mystery force, due to mass. It doesn't know what CAUSES it. Shaver says "exd," finely divided (disintegrated) matter, falling toward and through integrated matter, causes the phenomenon known as gravity.—Ed.

"WOW!" HE SAYS

Sirs:

WOW!! The June issue of A.S. is terrific. Did you know that I was so pleased with it that I bought another—just so I would be sure and not lose the pleasure in reading it, just in case I lost my first issue, also to file away a copy for future references. If you have any more issues like this June issue, I'll be forced to buy a copy every

month beside the one which is sent to me through subscription. Every story was a sellout except they weren't long enough. I'm looking forward to a story by Mr. Shaver with at least 50,000 words.

Why not republish "I Remember Lemuria!" in one of your issues? I regret to say that I had a copy but LOST it. I almost bawled like a baby when I couldn't find it. You should have a sort of Hall of Fame section and reprint all the old favorites of Mr. Shaver to bring newcomers up to date.

Charles A. Gervasi,
95 Chestnut Street,
Franklin, Mass.

We are sending you a copy of "I Remember Lemuria!" for your files. We'd hate to think that you couldn't re-read the story any time you feel like it! We liked it as well as you did, and further, we believe it! Thanks for your letter. It was more than welcome.—Ed.

FERSEN NEVER IN TIBET

Sirs:

In the June issue of A. S. there is a misstatement re Eugene Fersen, author and originator of the "Science Of Being." Eugene Fersen was never in Tibet, neither did he get his knowledge from anybody else. He is the originator of the contents of that (which means, organized knowledge). Also, Eugene Fersen is the discoverer of the secret of the Pentagonum or "magnetic pendulum" as Mr. McCann describes it. That was never before understood or known, only as a symbol. I have heard Eugene Fersen say that he wants to go to Tibet sometime, but he has never been there.

M. Atkins,
714A Hotel Belleclaire,
77th and Broadway
New York, N. Y.

Thank you for correcting Lee McCann's statement in the article in the June issue.—Ed.

HOW MANY SHAVER FANS?

Sirs:

I am a man with an open mind and as such I am going to ask your cooperation in an experiment I want to try.

About this Shaver Mystery. I am very much interested in it. So interested, in fact, that I am desirous to know how many people are interested in it. That goes for both pro and con thinkers. I want to receive letters from anyone and everyone who will write to me telling me what they think. If I get enough responses, the resulting tabulation should give us some idea of how widespread Mr. Shaver's theories are. I have been wondering for a long time how many people even know of them.

If you will print this letter, I am sure I will get some interesting results.

R. S. David, AMM,
T. T., N. A. S.,
Patuxent River, Md.

"YOU ARE UNDER ARREST!"



There's a Thrill in Bringing a Crook to Justice Through Scientific

CRIME DETECTION!

We have taught thousands this exciting, profitable, pleasant profession. Let us teach you, too, in your own home. Learn Fingerprinting, Fire Arms Identification, Police Photography and Criminal Investigation thoroughly, quickly and at small cost.

Over 800 of All American Bureaus of Identification employ students or graduates of I. A. S. You, too, can fit yourself to fill a responsible crime detection job with good pay and steady employment. But don't delay—get the details now. Let us show you how easily and completely we can prepare you for this fascinating work, during spare time, in your own home. You may pay as you learn. Write today . . . Now . . . Be sure to state age.

INSTITUTE OF APPLIED SCIENCE
1920 Sunnyside Ave., Dept. 4926, Chicago 40, Ill.

Be A
FINGER
PRINT
Expert

FREE!!!

Send for Thrilling
"BLUE BOOK
OF CRIME"

SONGWRITERS POEMS WANTED AT ONCE

Send Your Poems, Any Subject, for Immediate Examination and FREE BOOK: "YOUR FUTURE IN SONGWRITING."

RADIO CITY MUSIC ACADEMY

1674 Broadway New York 19, N. Y.

INVENTORS

Patent laws encourage the development of inventions. Our firm is registered to practice before the U. S. Patent Office. Write for further particulars as to patent protection and procedure and "Invention Record" form at once. No obligation.

McMORROW, BERMAN & DAVIDSON

Registered Patent Attorneys

186-G Victor Building Washington 1, D. C.

SKIN SUFFERERS

Tormented by itching-burning of ECZEMA, PSORIASIS, ATHLETE'S FOOT, PIMPLES, RASH. Use fast-acting LUMCO, a powerful seven ingredient emollient, calms itching almost instantly, quickens healing of externally-caused skin irritations, amazing results overnight. Use 10 days, if LUMCO does not help you, 100% money will be gladly refunded. Over 31 years' success. Large full-size jar Special Extra Strength \$2 postpaid or C.O.D. plus postage. Address LUMCO PRODUCTS DEPT. 401 KIMBALL, NEBR.

High School Course

at Home Many Finish in 2 Years

Go as rapidly as your time and abilities permit. Course equivalent to resident school work—prepares for college entrance exams. Standard H. S. texts supplied. Diploma. Credit for H. S. subjects already completed. Single subjects if desired. High school education is very important for advancement in business and industry and socially. Don't be handicapped all your life. Do a High School graduate. Start your training now. Free Bulletin on request. No obligation.

American School, Dept. H-C-52 Drexel at 58th, Chicago 37

A New Spine-Tingling Mystery!

WIDOWS OUGHT TO WEEP

By D. B. OLSEN

Murder . . . new detective character . . . set of brilliant characterizations . . . a terrifying creature with yellow eyes . . . gripping from cover to cover.

\$2.50 at all book stores

ZIFF-DAVIS PUB. CO., 185 N. Wabash, Chicago 1, Ill.

HOLLYWOOD TYPE

PERSONAL CARDS

100 PLAIN OR paneled
NAME ONLY \$1.00

WIGINGTON, P.O. BOX 1581, HOLLYWOOD

WIN with MAGIC CARDS



This special deck of playing cards with secret code on back of each card tells YOU what each card is when lying face down. Easy directions explain code and how to do many kinds of "Magic" tricks. Use same deck for usual card games, such as poker, bridge, etc. Only \$1.49. Get a deck today. SEND NO MONEY. Send Name and Address. Pay postman on arrival only \$1.49 plus postage. Money back if not delighted. Address Hollister-White Co. Dept. 710-M, 215 No. Michigan Ave., Chicago, 1, Illinois.

CUT CHIN STUBBLE COSTS

You can buy razor blades for as low as 1c each. Send 10c for 4 trial blades and free sensational quantity price list. Shall we send single or double edge blades?
M. LURA, 827 Inwood St., Pittsburgh 8, Pa.

CLASSIFIED ADVERTISING

Song Poems

POEMS wanted for musical setting. Send poem for immediate consideration and Free Rhyming Dictionary. Richard Brothers, 86 Woods Building, Chicago, Ill.

POEMS Wanted. Free examination. Send poems to J. Chas. McNELL, Master of Music, 510 2D South Alexandria Ave., Los Angeles 5, Calif.

SONGWRITERS: Songs published monthly. Advance royalty. Send your songs or poems today for our exciting offer. Hollywood Tunesmiths, Dept. EE-6, 1557 N. Vine St., Hollywood 28, Calif.

Miscellaneous

MAGAZINES (back dated)—foreign, domestic, arts. Books, booklets, subscriptions, pin-ups, etc. Catalog 10c (refund). Cicerone's Center, 853 First Ave., New York 17, N. Y.

CORRESPONDENCE Courses and self-instruction books elegantly used. Sold. Rewarded. Cash advances. Satisfaction guaranteed. Cash paid for used courses. Complete information and 100-page illustrated bargain catalog Free! Write Nelson Co., Dept. 66, Chicago 6, Ill.

BORROW by Mail! Loans \$50.00 to \$1,000.00 to employed men and women. Easy, quick. Completely private, confidential. No endorses. Repay in convenient monthly payments. Details Free in plain envelope. Write First Loan Co., World Herald Bldg., Dept. N-58, Omaha, Neb.

SCIENTIFICATION, weird, fantastic; books, magazines. Werewolf Bookshop, 621A Maryland, Pittsburgh 6, Pa.

ALASKA—"The Last Frontier" offers thousands of excellent opportunities! \$1.00 brings official Government map and 1947 copyrighted report describing potential opportunities in Commercial Fishing, Mining, Fur Farming, Prospecting, Aviation Timber, Aerofishing, Live Stock Raising, Business Enterprises, Government Homestead Lands. Alaska Opportunist, 6417 Homewood Ave., Dept. 22, Hollywood 28, Calif.

INTERESTED in Latin America & Foreign employment? \$1 brings 1947 Foreign Service Directory listing Oil, Aviation, Mining, Transportation, Manufacturing, Construction concerns with foreign interests and tips for immediate application. Global Reports, 6417 Homewood Ave., Dept. 22, Hollywood 28, Calif.

AT HOME—Your own manufacturing business; making popular \$1.00 novelties. Cost you 3c to 15c. Everything supplied. Write So-Le Works, Dept. W-648, Loveland, Ohio.

RAISE Turkeys the new way. Write for free information explaining how to make up to \$3,000.00 in your own backyard. Address National Turkey Institute, Dept. 289, Columbia, Kansas.

YES, Men's shoes in sizes 11½ to 16. Widths AA to EEE. Finest quality, moderate price. Free circulars. Write Kingsize 125, Brockton, Mass.

REDUCE! Overweight can be dangerous for you! Heart ailments, high blood pressure, diabetes often result from neglect! Send for free reducing literature! Act promptly! Daniel S. Mead Company, 200 West 20th Street, New York 11, N. Y.

WAMPYE Bookshop. Weird-Fantasy-SF. Send for free lists. 1238 Murdoch Rd., Pgh. 17, Pa.

BOOKS—Magazines (Back Dated). Send dime for list. Clark's, 302 N. Junction, Detroit, Mich.

HOW does he do it? The most baffling mind reading acts ever performed fully explained. Easy when you know how. Send 25c. Austin Specialties, 818D Walter, Chicago 51, Ill.

The editors are sure you'll get some interesting results too! You don't know what you are letting yourself in for. Okay, Shaver fans, show him!

As for your editor, he can give you some of the information you want. For instance, we have close to 15,000 letters from pro and con readers concerning the Shaver Mystery. We have perhaps 3,000 from people who have had similar experiences! We no longer count letters—we weigh them. The fan mail on the June issue, for instance, weighed eight pounds. Mr. Chet Geier, who is a newcomer in this thing with his club, has already compiled a list of some 4,000 names, and has many more letters than that, in his files. He printed 2,000 copies of his little magazine, the Shaver Mystery Magazine (40 pages), on the strength of his own estimate of his needs, and now thinks it will be inadequate. Offhand, considering the circulation of AMAZING STORIES, we think there are as many as 50,000 people very much interested in the Shaver Mystery, and well able to discuss it intelligently.

Does that answer your question?—Ed.

TO THE MOON— VIA ELECTRICITY

By CHARLES REOUR

LITERATURE on trips to the moon is voluminous. From the earliest times, even before men were aware of the fact that the moon is a quarter of a million miles away, methods of reaching it have been proposed. No method has been neglected no matter how fantastic it may have sounded. We have stories in which trips are made by balloon, by wings, by flying machines of all sorts—and most recently by the logical method—the rocket.

It is automatically understood now that when one speaks of a trip to the moon, that it will be made in a projectile propelled by rocket motors. These rocket motors may—in fact, will—be of a liquid fuel type, similar to the V-2, except for the use of more powerful propellants. Or perhaps with the study and development of atomic power, some method of applying it to rocket propulsion will be found. Ultimately this will probably be the necessary solution for practical interplanetary travel.

Nevertheless, several other methods of hurling rockets into space have been proposed—several methods that are quite feasible. The thing that prompted inventors and designers to think of techniques to get rockets into space besides the conventional use of the rocket motor, is the tremendous amount of fuel necessary to accelerate the rocket to the escape velocity of seven miles per second. If it were possible to carry enough fuel it would not be necessary to attain this escape velocity. The rocket could proceed at a constant acceleration. Unfortunately the combination of

low-powered fuel with the little fuel that the rocket can carry, puts the finger on rocket travel for the present. Eventually this will be overcome.

Consider, however, another proposition that involves giving the rocket a terrific initial velocity without using rocket fuels at all.

In 1937, a book appeared, called "Zero to Eighty" by Akkad Pseudoman. The author's name was obviously a pseudonym. The book was really written by Dr. E. F. Northrup, physicist and research man of great ability. Although he has since died, his name is remembered in a device that he invented that is widely used, "the Northrup induction furnace."

Dr. Northrup's field was high frequency current and the phenomena associated with it. By high frequency current is meant electrical energy of a high frequency compared with the 60 cycle power commonly used. It does not refer to frequencies of the order of radio waves—the high frequencies that we are most familiar with. Dr. Northrup experimented with alternating currents of a frequency between 60 and 15,000 cycles per second, just below the radio spectrum, at least today's radio spectrum.

It is a known fact that if a conductor, a piece of metal, say, is placed near another conductor carrying such a current, that is in the field of the conductor, the original piece of metal will be heated. There is practically no limit to the temperature that may be attained and today this fact is widely used in electric induction furnaces for heating metals. High-grade steels are made in furnaces simply surrounded by conductors carrying currents from generators whose frequency is about five or ten thousand cycles per second.

Northrup, however, was familiar with another phenomena which implied a great deal of use even though at present it is not in practice. In a series of coils carrying high frequency current, and laid end to end, a *magnetic wave* is found to travel with a terrific velocity along these coils and a piece of metal caught in this field will be carried with it.

In his story of a trip to the moon Northrup goes into great detail describing such a set-up. He describes a conventional rocket with rocket tubes, etc., but whose initial speed is given to it by a series of huge coils laid along the side of a mountain and powered by large electric generators of various frequencies, ranging from 1000 to 5000 cycles per second.

The rocket with its passengers was placed at one end of this series of coils on a car that ran on tracks. At the proper moment the coils were energized and rocket, caught in a tremendous magnetic wave, hurled along this track which gradually pointed skyward.

A tremendous velocity was built up and after the rocket had left its track, the rocket motor was switched on. With the aid of the velocity imparted to the rocket by the coils, plus that of the rocket motor, the rocket easily left the earth.

IF NATURE SLEEPS

You should take OSR Tablets. If you lack pep, energy, vitality and don't have natural desires for fun and good times, if you suffer from aches and pains, coated tongue or bad skin, it may be due to faulty elimination. **HELP NATURE** with OSR Tablets—nature's herbs in tablet form. **CAUTION:** Take only as shown by simple directions on the box. **THE SAFE PRESCRIPTION TYPE** ingredients in OSR Tablets give quick, pleasant relief. Yes, you'll smile as you do your daily duty like a healthy man or woman. **SEND NO MONEY**—pay postman \$1.50 for a box of 180 OSR Tablets. Or send \$1 NOW and SAVE 35c. **HEALTH IS POWER—WRITE TODAY.** STANDARD REMEDY CO., Dept. 2-4, Baltimore 2, Maryland.

ACCOUNTANT

BECOME AN EXPERT

Executive Accountants and C. P. A.'s earn \$7,000 to \$10,000 a year. Thousands of firms need them. We train you thoroughly at home in spare time for C. P. A. examinations or executive accounting positions. Previous experience unnecessary. Personal training under supervision of staff of C. P. A.'s. Placement counsel and help. Write for free booklet, "Becoming an Accountant," The Profession That Pays. C. J. APPROVED. LASALLE Extension University, 417 So. Dearborn St. A Correspondence Institution Dept. H-475 Chicago 5, Ill.

INVENTORS

Learn how to protect your invention. Specially prepared "Patent Guide" containing detailed information concerning patent protection and procedure with "Record of Invention" form will be forwarded to you upon request—without obligation.

CLARENCE A. O'BRIEN & HARVEY JACOBSON

Registered Patent Attorneys

744-J District National Bldg. Washington 5, D. C.

BIG MONEY IN YOUR OWN BUSINESS

Amazing, scientifically developed LIQUID IMITATION MARBLE, FIBER-TITE, FLOORING, FLEXIBLE MOLDS brings you a fast money making opportunity. Work full or spare time and make big profits. Experience unnecessary. No large investment required. Work from your home. Write for FREE CATALOG and full details.

COMPOSITION PRODUCTS CO. Dept. 2D8, 5853 Delmar St. St. Louis 12, Mo.

ILLUSTRATED COMIC BOOKLETS

Sell our ILLUSTRATED COMIC BOOKLETS and other NOVELTIES. Each booklet size 4 1/2 x 2 1/4. We will send 25 assorted booklets prepaid upon receipt of \$1.00 or 75 assorted booklets sent prepaid upon receipt of \$2.00. Wholesale novelty price list sent with order only. No orders sent C.O.D. Send Cash or Money Order.

REPSAC SALES CO:

1 West 13th St. Dept. 40-K New York 11, N. Y.



LEG SUFFERERS

Why continue to suffer without attempting to do something? Write today for New Booklet—"THE LIFE METHODS FOR HOME USE." It tells about Varicose Ulcers and Open Leg Sores. Life Methods used while you walk. More than 40 years of success. Praised and endorsed by multitudes.

LIFE METHODS, 3284 N. Green Bay Ave., Dept. J-40, Milwaukee, Wisconsin

FREE BOOKLET



WHY WEAR DIAMONDS

When diamond-dazzling Zircons from the mines of far-away mystic Nam Ou to perfection and magnificent handling, beauty, stand acid, true tests full of FIKHIZABLE mountings. See before you buy. Write for FREE catalog.

National Zircon Co., Dept. 36, Wheeling, W. Va. Catalog FREE!



BEFORE AFTER

**Yes, You Can Have
A Good-Looking Nose**

Nobody today need go through life with the handicap of a badly shaped nose, disfigured features. Get your copy of "YOUR NEW FACE IS YOUR FORTUNE." See how Plastic Surgery quickly, easily re-shapes ugly noses, sets back protruding ears, corrects other defects. This book by a famous plastic surgeon contains over 88 "before and after" photos, answers all the questions usually asked. Sent post-paid in plain wrapper for only 25c.

FRANKLIN HOUSE, Publishers
625 Drexel Bldg., Philadelphia, Pa., Dept. 2C

LAW...

STUDY AT HOME Legally trained men win higher positions and bigger success in business and public life. Greater opportunities now than ever before.

More Ability: More Prestige: More Money step by step. You can train at home during spare time. Degree of LL.B. We guide you through all text material, including 16-volume Law Library. Low cost, easy terms. Get our valuable 48-page "Law Training for Leadership" and "Fortunes" books FREE. Send \$0.75 & 1. APPROVED. **LASALLE EXTENSION UNIVERSITY**, 417 South Dearborn Street, A Correspondence Institution Dept. L-475 Chicago 5, Ill.



STOP TOBACCO?

Banish the craving for tobacco as thousands have with Tobacco Reducers. Write for free booklet telling of ingenious effect of tobacco and of a treatment which has relieved many men. Caution: Use only as directed.

30 Years in Business
THE NEWELL COMPANY
284 Clayton, St., St. Louis 5, Mo.

FREE BOOK

BOOKLETS

THE KIND GROWNUPS LIKE. Each one of these booklets is POCKET SIZE, also contains 8 ILLUSTRATIONS, and is full of fun and entertainment. 12 of these Joke booklets, ALL DIFFERENT, will be shipped prepaid upon receipt of \$1.00, cash or money order. No orders sent C.O.D. Print name and address and mail to:

Treasure Novelty Co., 72 Fifth Ave., Dept. 55-J, New York 11, N.Y.



**COLT & LUGER
WINCHESTER &
REMINGTON
AMMUNITION
SINGLE SHOTS
DOUBLE BARRELS
REPEATING &
AUTOMATIC
RIFLES - SHOTGUNS**

Send 30c for Gunsmith Manual & Catalogue & Journal, or Send 60c for Gunsmith Course & Catalogue & Journal.

New York Company, 10600-10710 West Block, Ridgeway, Pa.

PATENTS

Write for full information on what steps an inventor should take to secure a Patent.

RANDOLPH & BEAVERS, 920 Columbia Bldg., Washington 1, D.C.

The book describes the trip around the moon and in general is entertaining science-fiction. Northrup, however, was not so much concerned with the fictional aspects of the trip as he was the method that he described.

Evidently before he wrote the book, Northrup had given the matter very deep and serious thought. The back of the book contains a technical supplement that is shockingly detailed and exhaustive. Northrup believed that his method was feasible for he goes into elaborate mathematical calculations to show the energy necessary, the types of generators to be used, the dimensions and materials of which the rocket was to be constructed—everything necessary to make the trip a success.

The book alone was not Northrup's contribution to the problem. He shows photographs and diagrams of experiments that he conducted on a smaller scale. Miniature models of these hypothetical projectiles were tested in the laboratory. To all intents and purposes they appeared to have worked, and well too, for apparatus was built for transporting mail along coils of this design, and a projector for hurling a life-line to foundering vessels was also constructed.

It is hardly likely that a man of Northrup's stature could be entirely wrong in this matter and perhaps the scientific world will give this matter some consideration should it be difficult or impossible to devise sufficiently strong rocket fuels in the future, or should the application of atomic power take too long a time.

In some respects it is surprising that the book did not make more of a stir in science-fiction circles for it certainly is entertaining. Probably the big drawback is that it is such a mixture of fact and fiction, autobiography and biography, laboratory manual and story-book, that it made no impression.

Numerous technical people who reviewed the book praised it highly, both as fiction and as a technical work, and congratulated Northrup on the soundness of his scientific reasoning.

SPACE SHIPS LIMITED

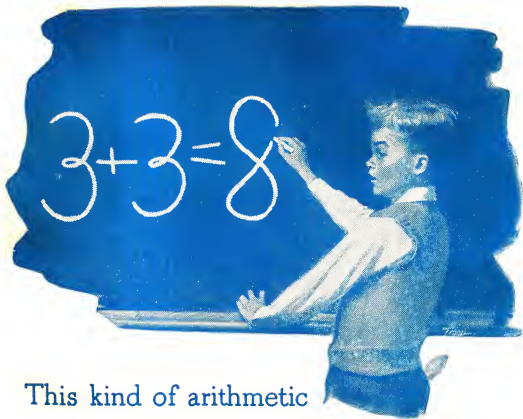
(Concluded from page 173)

A very definite radiation hazard, however, is the soil of the planets on which our space ships would land. We do not at present know to what extent such soil is radioactive. But we can suspect the worst.

Most of them have much lighter atmospheres than earth. Their unprotected soils are subject to much more unfiltered sunlight than is earth. And we know that sunlight activates radiation. It activates the radium on your watch dial. It increases the activity of all radioactive materials.

On other planets, therefore, your Geiger counter might not give you warning soon enough. Their radioactive soils might activate you, too.

PRINTED IN U.S.A.



This kind of arithmetic may put Johnny through college

Here's how it works out:

**\$3 put into U. S. Savings Bonds today
will bring back \$4 in 10 years.**

Another \$3 will bring back another \$4.

So it's quite right to figure that 3 plus
3 equals 8 . . . or 30 plus 30 equals 80
. . . or 300 plus 300 equals 800!

It will . . . in U. S. Savings Bonds. And
those bonds may very well be the means

of helping you educate your children as
you'd like to have them educated.

So keep on buying Savings Bonds—
available at banks and post offices. Or
the way that millions have found easiest
and surest—through Payroll Savings.
Hold on to all you've bought.

You'll be mighty glad you did . . .
10 years from now!

SAVE THE EASY WAY... BUY YOUR BONDS THROUGH PAYROLL SAVINGS

*Contributed by this magazine in cooperation
with the Magazine Publishers of America as a public service*



COMING...

IN THE OCTOBER ISSUE OF

MAMMOTH
WESTERN

Range Doctor

by OSCAR J. FRIEND

This 60,000 word psychological novel of the West is one of the greatest stories we have ever published. It's loaded with action and danger and has a plot that will leave you gasping. You can't afford to miss it. Be sure to reserve your copy now at your newsdealer and read **RANGE DOCTOR!**

MAMMOTH WESTERN

On Sale August 5 at Newsstands Everywhere

25c PER COPY